THE FUTURE OF INTERACTIVE ENTERTAINMENT

UK EDITION AUGUST 1999 £3.50



DREAMCAST ■ PLAYSTATION ■ NINTENDO 64 ■ PC ■ ARCADE ■ ONLINE

F355 CHALLENGE

SEGA'S YU SUZUKI REVS UP FERRARI RACING REALISM

EVIL GAMES

CAPCOM'S SURVIVAL HORROR SEQUELS INVESTIGATED

GTA 2

GUNS. LOTS OF GUNS

PIRELLI





Software developers need figureheads. Whether it's Lionhead's Peter Molyneux, Shiny Entertainment's Dave Perry, or, most famously, Nintendo's Shigeru Miyamoto, such individuals can become almost brands in themselves. In the same way a cinema-goer will not pay to see a movie because it is distributed by Columbia or Paramount, knowledgeable videogamers do not care whether a potential purchase carries the branding of Infogrames or Electronic Arts. If Sid Meier's name is connected with the product, however, suddenly the spending senses being to tingle.

Yu Suzuki is a name Sega regularly calls upon in order to give its software properties punch. His legacy includes some of gaming's all-time greats, including *OutRun*, *Virtua Fighter* and *Virtua Racing*, and the profile of his latest project, the outrageously ambitious *Ferrari F355* coin-op previewed on page 48, is no doubt expected to raise Sega's standing as the company faces a testing period.

If Suzuki-san's moniker is familiar, though, the names Henk Rogers and Shinji Mikame may not be, and yet both, in their own ways – Rogers with *Tetris* and Mikame-san with *Resident Evil* – have made huge impacts on the videogame world. Both have reputations built over years of inspiration. Both chose to discuss their work with **Edge** this month.

Immersed in warped alien gameworlds or absorbed by the detail offered by the hottest driving game of the moment, it's easy to undervalue the human element at work behind the scenes. To do so, however, is to serve an injustice, which is why **Edge** continues to recognise the flesh and blood whose influence over silicon makes videogaming the phenomenon it is.

Contacts

Editorial

Future Publishing
30 Monmouth Street
Bath, BANES, BA1 2BW

Telephone: 01225 442244
Fax: 01225 732275
Email: edge@futurenet.co.uk
Recruitment: chris.haill@futurenet.co.uk

Subscriptions

Future Publishing Ltd
FREEPOST BS4900, Somerton
Somerset TA11 7BR
Telephone customer services:
01225 822510
Telephone customer order line:
01225 822511
Fax: 01458 274378
Email: subs@futurenet.co.uk

People on Edge

Tony Mott editor
João Sanches reviews editor
Jon Jordan writer
Jane Bentley production editor
Nicolas di Costanzo Tokyo bureau

Terry Stokes art editor
Darren Phillips designer

Chris Haill advertising manager
Neil Abraham display advertising
Amar Hussain classified advertising
Chris Haill recruitment 0171 317 2604
Advertising fax 0171 486 5678
Derryn Vranch production coordinator
Lou Reffell production manager
Production fax 01225 732293
Sarah Orchard ad design
Beccy Stables print services coordinator
Judith Green group prod manager
Rachel Spurrier pre-press coordinator
Simon Windsor, **Mark Gover**,
Jason Titley colour scanning
Chris Power foreign licensing
Jackie Garford publisher
Rob Price publishing director
Jane Ingham managing director
Greg Ingham chief executive

Colour reproduction

Colourworks Repro, Bristol
Phoenix Repro, Bath

Print

Cradley Print, Warley,
West Midlands
Edge is printed on Royal Press 90gsm

Production of Edge

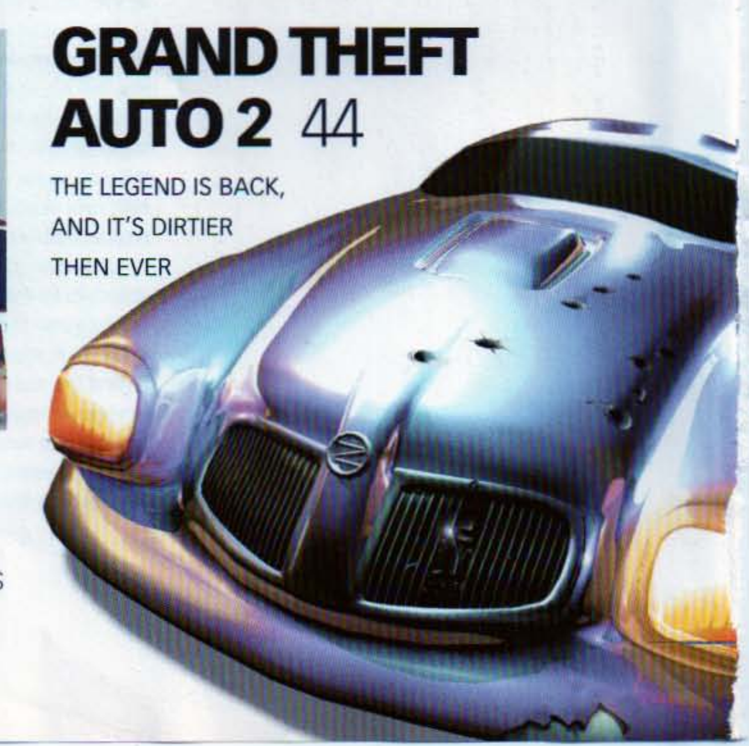
Hardware Power Macintosh, G3, PowerBook, Quadra by Apple
Software QuarkXPress, Adobe Photoshop, Macromedia FreeHand, Pixar Typestry and Nisus Writer
Typography (Adobe®)
Formata light/**regular**/**medium**/**bold**
Vectora light/**bold**/**black** Bose12Sans/**bold**/Univers Ultra Condensed
Fifth colours: Pantone®
Sections 8520



Printed in the UK
© Future Publishing 1999

ABC (Audit Bureau of Circulation)







TESTSCREEN

The world's most honest, accurate videogame reviews



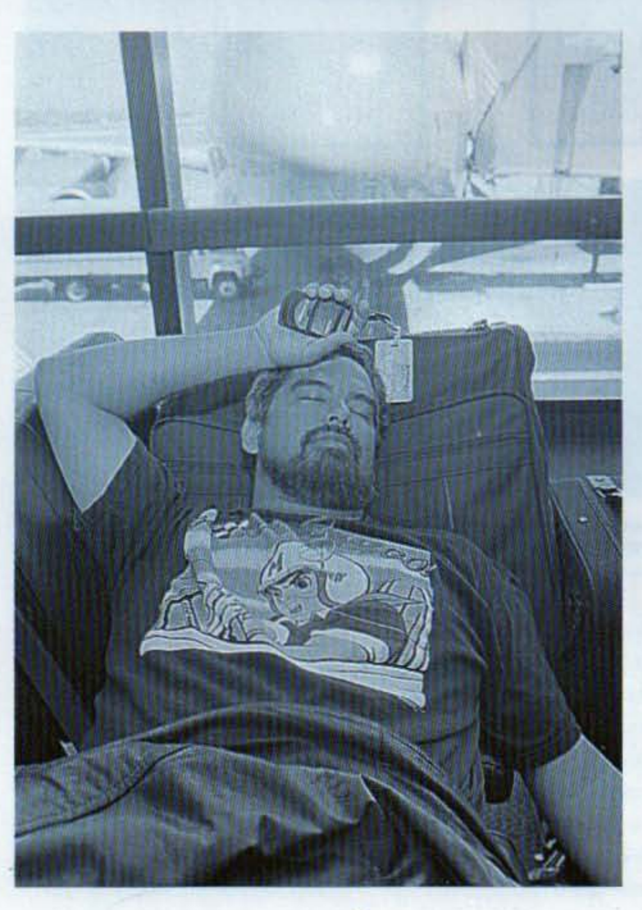




PRESCREENS 13

Castlevania Resurrection* and *MDK 2* in Alphas precede *Extreme Biker*, *Virtual-On 2* and a newcomer to the strategy arena, *Warmonkeys





Mr Tetris 69

His face may not be familiar, but you'll have played the game he's made a living out of. Meet Henk Rogers, the man who helped make falling blocks a worldwide institution

an audience with...

Les Edgar 120



Cutting Edge

The latest news from the world of interactive entertainment

SEGA FACES UP TO NEW CHALLENGE IN JAPAN

With Dreamcast romancing hardcore gamers overseas, Euro run-in is subject to increasing speculation



Sega company chairman Okama-san and president Irimajiri-san enjoy the calm before the storm (left) at what was a key New Challenge Conference

The latest Sega New Challenge Conference took place in June in Ariake, Tokyo, with the spectre of recent failures casting a sombre shadow over proceedings. Designed both as a six-month round-up of the year's successes to date and an enticing showcase of forthcoming projects, Sega struggled to generate optimism thanks to the recently announced company losses (¥45bn, compared to ¥35bn the previous year) and the axing of 1,000 jobs.

Unsurprisingly, the key announcements involved Dreamcast. At the top of the agenda was the retail price drop (reported last month), followed by a disappointingly slim selection of new titles. *Shenmue*'s release was pushed back further, from August to October 28 – but Sega did promise to begin an aggressive marketing campaign at the end of June, synchronising with the date of the hardware price drop.

The key titles premiered at the event were *Virtua Striker 2* (developed by Genki), *Virtual-On 2* (see p31) and *Project Ares*, which is being crafted by the team responsible for the legendary *Phantasy Star* RPG series. News regarding new titles from *Sega Rally* producer Tetsuya Mizuguchi (reputedly an action title and an RPG) were expected, but Sega remained tight-lipped.

Vow of silence

Sega also remained silent concerning future plans for Dreamcast DVD compatability, its plans for a Zip drive with Iomega, and the release of a 56K modem in the US, although following the conference it became clear that the company will eventually release new modems for Japan and Europe, whose Dreamcasts initially ship with 36.6K units.

Providing little in the way of recompense was a controversial sales announcement: one million Dreamcasts shipped to date – a figure disputed by some thirdparty developers.

The most exciting event of the day was the introduction of Dreamcast Heat, a worldwide online gaming arena developed in conjunction with SegaSoft's online game service, Heat

Perhaps the most exciting event of the day was the introduction of Dreamcast Heat, a worldwide online gaming arena developed in conjunction with SegaSoft's online game service, Heat, a pet project for Sega's












Highlights from Sega's next wave of titles from the recent New Challenge Conference included (by column, from left to right) *Project Ares*, an RPG from the team behind the popular *Phantasy Star* series; *Bio-Hazard: Code Veronica*, which is now shaping up impressively; *Golf* (working title) from Data East, a rather cynical clone of Namco's *Everybody's Golf* featuring network play; *Ecco the Dolphin* from Appaloosa; and *Berserk*, an action-adventure from ASCII

management for some time, and a useful weapon in the impending console wars.

If Sega is waiting until the next Tokyo Game Show to reveal its biggest surprises then it may just have blown its last chance for a captive audience: Sony is rumoured to have booked twice as much booth space as last year to introduce the next-generation PlayStation. Sega will need a silver-lining of unprecedented shininess to overcome this dark cloud.

Development concerns

Closer to home, **Edge** has been speaking to a selection of developers currently working on Dreamcast projects, and a number of interesting factors have come to light. The first, and potentially most important, is the claim that Sega is currently offering coders no official support for full-screen PAL (50Hz) software, instead encouraging them to do their best with regard to aspect ratio. In effect, this could see many early Euro releases appearing with black borders – although Sega has a plan: it is suggesting to developers that, wherever possible, their games should include a 60Hz option in software, ensuring that compatible TV sets will display full-screen, full-speed imagery.

According to an anonymous source, this is not the only instance of lack of developer support from Sega. "They haven't told anyone, let alone us, how to support the network yet, so there are no multiplayer networked games except what's being done in-house at Sega," **Edge**'s contact reported. "As soon as they tell us how to make our game networked, we'll do it."

The same source went on to relate his understanding of the Euro machine's 33.6K modem – apparently it is a 'software' unit which is very cheap to implement but consumes a small amount of CPU cycles. The 56K modem for the US market is believed to be a hardware model.

DREAMCAST USER PROFILE

With the announcement of one million Dreamcast sales in Japan, Sega revealed the machine's market demographics, happily underlining the news that 30 per cent of users are using the console to spend time surfing the Internet, sending email or gaming online. The dearth of female gamers – once perceived to be a target audience for Sega – is not so assuring, however.

Types of players
Light users: 27.7%
Hardcore players: 72.3%

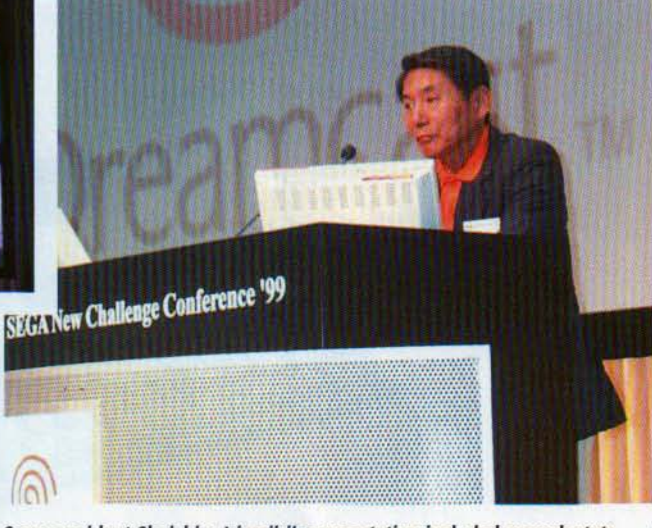
Percentage of players connecting to the Net
November '98: 34.3%
December '98: 28.4%
January '99: 41.8%
February '99: 41.6%
March '99: 30.7%
April '99: 33.5%

Player age
Under 14: 11.6%
15-19: 21.4%
20-24: 22.7%
25-30: 25.4%
30-34: 11.7%
Over 35: 7.3%

Sex
Male: 94.2%
Female: 5.8%







Sega president Shoichiro Irimajiri's presentation included enough stats to keep attendees scratching their heads (top left), plus new games (left)

DC ADD-ONS

The following peripherals are set to launch with Dreamcast in the UK on September 23:

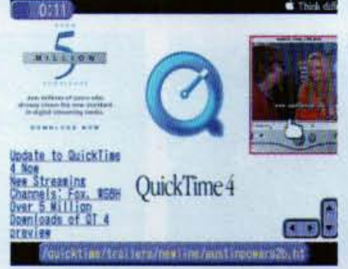
Standard controller	£20
Arcade stick	£30
Racing controller	£35
Lightgun	£35
Keyboard	£20
Rumble pack	£20
Scart cable	£15
VMS unit	TBA













Dreamcast's *Dream Passport 2* software is to be upgraded after it was discovered that Internet standards such as *QuickTime* and *Shockwave* could not be supported. The browser has no restriction on viewable content (top right)

Passport problems

In other Sega developments, it has come to light that Internet virgins seeking to cruise the information superhighway aboard a Dreamcast on September 23 could be sorely disappointed. The *Dream Passport 2* software that will ship with the console offers only limited functionality compared to contemporary browsers from Netscape and Microsoft. Crucial support for streaming media, *QuickTime*, *Shockwave* and dozens of other Internet standards have been omitted from the Dreamcast browser (programmed by Access). Sega claims that a more capable third iteration of the software is planned for 'sometime in early 2000'.

The browser's inadequacies are a serious flaw in an otherwise laudable plan. Sega Europe's free Internet deal with BT is nothing if not timely. With Dixon's Freeserve and competitors such as Virgin.net already appeasing the general public, it would seem that Sega could potentially have laid a golden egg.

While Dreamcast's £200 price point may prove an attractive proposition for consumers once looking at purchasing an iMac, the technological limitations of Sega's Web browser may leave many buyers frustrated. On the technological battleground of the Web, second best is simply not good enough, with Internet technologies matching videogame developers in terms of competitiveness.

Ironically, as *QuickTime*, Apple's respected Internet multimedia standard, enters a powerful fourth incarnation (complete with MP3 and Video CD support), its iMac may lose sales to Dreamcast equipped with a browser barely capable of downloading audio. However, compared to the original *Dream Passport* shipped with the Japanese iteration of Dreamcast, the updated version 2 (due to ship mid-July in Japan) is a veritable technological acrobat. That first rendering supported nothing more than basic HTML, GIFs and JPEGs.

Edge has had the opportunity to surf the Net via Dreamcast, and other than having to adjust to the occasionally overlarge text size, the experience is largely acceptable. However, certain expected facets of the Web, such as Microsoft's Hotmail service, were rendered unobtainable due to *Dream Passport*'s inability to accept cookies.

Surprisingly, the 640x480 television-friendly resolution has little affect on the overall experience of Web browsing. Unsurprisingly, the technological limitations of *Dream Passport* do.

With the right software, a Dreamcast could prove one of the essential buys of 2000 – and not only for the hardcore gamer. Armed with suitable marketing tactics, Sega could find recruits to its cause among those unwilling to shell out for a £1,000 iMac. But if it poorly supports those new troops with inadequate arms such as *Passport 2* then the tide may turn against Dreamcast – at least in the Internet sector – for good.



Crucially, a Dreamcast keyboard will be available at launch – for £20

NINTENDO CLAIMS 64DD FAITH AS **GAME BOY LINKS UP**

Protracted and convoluted development period fails to quash big N's peripheral vision

Despite senior-insider claims to the contrary (see **E**71), Nintendo has announced that it plans to ship around 500,000 64DD units in Japan, perhaps even as soon as Christmas, with president Hiroshi Yamauchi apparently confident that all will be sold.

Furthermore, the company is allegedly planning to set up an online network for 64DD owners in partnership with fellow Japanese company Recruit. The service – provisionally known as Enternet – would offer downloadable games and add-ons in addition to some form of multiplayer gaming structure. Oddly, an Israeli technology company named Surf Communications Solutions has been linked with the manufacture of a 64DD-compatible modem to allow users access to Enternet. (Release of the peripheral and support for Enternet outside of Japan is not even a consideration, of course.)

None of this speculation came up in a recent interview with **Howard Lincoln**, however. Instead, NOA's chairman discussed the recent $1bn dollar deal with IBM and

"I am convinced that our strategy of focusing on the N64 as a home entertainment-based game product that connects to the TV is the right one" Howard Lincoln, NOA

expanded a little on the partnership with Matsushita, explaining that the company "was called to help [Nintendo] get away from the ROM cartridge model. We're excited about their participation in helping us build a counterfeit-proof chip." Nintendo is hoping to make it "financially unfeasible" for pirates to manufacture and sell illegal Dolphin software.

Peripheral vision

Moving back to today's market, Lincoln was keen to point out the continuing success of the Game Boy, and its recent range of peripherals, promising "radical features" were on the way to increase the handheld's functionality. Indeed, Yamauchi-san recently told Japanese reporters that a Game Boy mobile phone adaptor was in development. It is believed that users will be able to download any one of Nintendo's gargantuan selection of Game Boy titles onto a flash-RAM cartridge via a mobile, which will connect to a dedicated Nintendo comms network. Limited Internet functions are also understood to be within the unit's capabilities. (Bandai is also preparing a similar system, entitled WonderGate, for its handheld WonderSwan console. It plans to hit the Japanese market some months before Nintendo by launching in late '99.)

Responding to analysts' claims that Nintendo's profits will dip in its next financial year, Yamauchi-san remained realistic, acknowledging that this was possible as the company made the transition from Nintendo 64 to Dolphin.



The 64DD may not lend itself to connectivity in the fashion Nintendo originally envisioned, but the big N may yet offer Net compatibility

New strategies

Lincoln also made reference to further exploitation of the hugely successful *Pokémon* range – a strategy that will ensure turnover while its 64bit format prepares to enter its twilight years.

After several months of relative dormancy, Nintendo is back promising a busy 2000. Not only is the company claiming to get its albatross-like 64DD out of the door (a move to fly in the face of pressure from critics of Nintendo's convoluted N64 message), but it may even provide the storage device with a stable online service. Game Boy diversification, meanwhile, shows the company's eagerness to exploit the most successful and durable format of all time.

If all this talk of functionality and convergence would seem to suggest Nintendo is moving away from games, though, Lincoln is adamant that its Dolphin will not become another multi-use set-top-box pipedream: "I am convinced that our strategy of focusing on the N64 as a home entertainment-based game product that connects to the TV is the right one on which to base the core of our future strategy."





Both Bandai's WonderSwan and Nintendo's Game Boy have Net connectivity in the offing, although the big N will pitch biggest

NEW PIPE PROMISES ONLINE REVOLUTION

Groundbreaking comms technology offers LAN-style performance in Internet gaming tests

According to **Edge** sources, the online evolution will gain considerable momentum with the launch of ADSL late this summer. Currently on trial via BT in 900 London homes, ADSL (Asynchronous Digital Subscriber Line) removes the need for the time-consuming conversion of data between digital and analogue forms. In effect, your PC speaks directly to the server without interpretation, facilitating, in part, incredible speeds for Net access.

Offering astonishingly low pings of three in lab conditions, test users trying BT's Wireplay service have boasted unrivalled performance. "It's like playing over a LAN – probably better," said one user. With download speeds of 2Mb/s and uploads of 128K/s mooted, its speed could pave the way for a generational leap in online game design.

The most interesting aspect of the connection is that it offers a constant link to the Internet. Launch a game, or open a browser window, and the response is near instantaneous. As the Web is, at best, a sluggish behemoth, a cache system will no doubt be employed to speed up page traffic.

BT is currently denying what is billed as 'the worst-kept secret in the industry'. During a recent parliamentary debate, **Ian Bruce**, Conservative MP for South Dorset, revealed to the House that telecommunication companies are planning toll-free Internet access. This, he claimed, would be available "within three months." As he'd recently attended a dinner for the Telecommunications Managers Association – with which he has close ties – his claims appear to have firm grounding.

With other companies beginning to offer 'free' Internet access for limited periods – including Localtel and electronic goods vendor Tempo, with free off-peak calls – the linking of ADSL with toll-free access is a predictable move. BT will, naturally, wish to gain a stranglehold on the Internet industry. **Edge** sources have indicated that BT will offer ADSL at launch for a flat-rate fee of £30 per month, allowing unlimited access. One problem, however, is that BT technology at exchanges throughout the country are not yet capable of supporting the standard. BT is making changes, but a launch later this year is unlikely to offer ADSL to the entire country.

The potential of ADSL is breathtaking. From online broadcasting – previously a grim, painfully inadequate experience – to e-commerce, its remit is not restricted to Web browsing and gaming. **Edge** will be looking at the potential of ADSL in more detail next month.



ADSL has the potential to allow users to run many online functions simultaneously and efficiently

CUTTINGS

Sega stays on the ball
Not content with getting Dreamcast on Arsenal FC shirts, Sega has also signed up failing Italian giants Sampdoria and French evergreens Saint Etienne. The value of these deals has not been revealed but it seems likely that they have already cost Sega over $20m of its European budget of $100m.

PlayStation sales take dip
Sega's decision to drop its Dreamcast retail price to ¥19,900 (£100) may well have affected Japanese console buyers, with native PlayStation sales recently dipping below the 30,000-per-month mark for the first time in several years.

Infogrames gets readies
Fresh from one buying spree, Infogrames is planning to raise another $210m. It has confirmed this will be used to fund further acquisitions.

Fantasy voiceovers
Square has announced details of some of the voice talent behind its *Final Fantasy* movie. It will feature Alec Baldwin, James Woods, Donald Sutherland and Steve Buscemi.

Microsoft goes vocal
Microsoft has acquired ShadowFactor, developer of the realtime voice software *BattleCom* which allows online players to talk to each other via a headset. Microsoft has also licensed Creative's EAX technology which improves the quality of game sound effects. Both will be added to the *DirectX 8.0* feature set.

Playing on TV
Sky's new videogames show, 'Games Republic', mixes its contestants' playing skill with knowledge about gaming. It will air in August and anyone interested in taking part should visit **www.games_republic@tvchannel.co.uk** or write to Games Republic, Contestants, PO Box 24121, London, SW18 1WN.

Next-generation laser gets greenlight
Sony has developed a new laser that can read both standard CDs as well as DVDs. It will reduce the size and cost of the NGPS, as previously two laser assemblies would have been needed to ensure backwards compatibility.

ART ON SHOW



One of **Edge**'s sister titles is launching Computer Arts Live!, an event which kicks off in London for two days from September 14 and moves on to Manchester for September 20-21.

The event will feature Q&As, interviews and tutorials with key design figures, plus a digital art gallery, products on test, and other elements aimed at design pros. Visit **www.computerarts.co.uk** for booking details.

VIRGIN IN SLASH SHOCKER

PlayStation software prices finally drop in controversial move

Virgin Megastores' decision to give PlayStation owners what it believes to be 'a very good reason to buy a full-price game', cutting the prices of new titles such as *Driver* and *Soul Reaver* from £45 to £30 on their day of release, has been met with disbelief by retailers and software publishers alike. Virgin's motives – to simply give consumers a better deal – are admirable, of course, but while other chainstores are able to match its lead, independent shops, lacking the buying power, will suffer.

The existence of Sony's Platinum range is partly responsible for the price drop: many consumers now ask game store staff how long it will take for new releases to be re-issued in budget form.

Virgin's offer claimed to be for a limited period only, but price cutting is known to be a long-term initiative.



Just one of six 'special' £30 titles at Virgin Megastores

PRESCREEN

EDGE PREMIERES INTERACTIVE ENTERTAINMENT'S FRESHEST FACES

The console market: look at the state of this

Now five years old, can anything stop the PlayStation?

They call them the dog days of July. Between TGS, E3 and ECTS, developers should be working, ensuring that they hit Christmas release schedules. Instead they're twiddling their thumbs, complaining about Jar Jar Binks, counting off the days until they fly out to Florida on their hols, and gossiping about the biz.

But if summer finds the development community in a laid-back mood, July 1999 finds the console market in an unsettled state. Europe and America are just two months away from Dreamcast's launch and success is balanced on a knife edge. Sometimes it looks as if Sega's last gamble could pay off. American pre-orders are high, the European Internet strategy looks solid, and original games such as *Trick Style* and *Ready 2 Rumble* look impressive. But then news from Japan casts a darker shadow. The console's price is slashed, more delays hit showcase title *Shenmue*, and software sales disappoint.

The situation at Nintendo is just as confused. Rare's big three are guaranteed to be big hits when they finally ship, and games such as *Quake II* and *Shadowman* will perform. However, it's hard to see how the N64 is going to bulk up its installed base to hit the global target of 35 million. Instead, Nintendo seems to be relying on exporting the *Pokémon* phenomenon outside of Asia and counting the cash generated by the Game Boy, while it quietly, if rapidly, engineers Project Dolphin behind closed doors. The phantom menace that is the 64DD, meanwhile, hangs over the annual Space World conference like a fat red herring. Nintendo may have game-design talent to kill for, but can it ever retain hardware market leadership?

Which leaves Sony firmly on top of the heap. But continuing PlayStation sales are creating a paradoxical situation. The number of potential triple-A titles still to reach this ageing platform is startling. Before the end of the year *Bio-hazard 3*, *Dino Crisis*, *Gran Turismo 2*, *Tekken Tag Tournament*, *Final Fantasy IX* and *Tomb Raider 4* will have been released. But at the same time there is a growing amount of scepticism concerning the launch date of the next-generation PlayStation, as well as concern over the speed with which Sony is supplying dev kits to codeshops outside of Japan. Have Sony execs considered the nightmare scenario where the strength of the original 32bit machine hampers its over-priced, under-supported 128bit successor? Could success, like failure, be a double-edged sword?





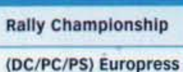


PlayStation *Gran Turismo 2*, N64 *Perfect Dark* and Dreamcast *Ready 2 Rumble* – three of 1999's big games. Sony appears to be in the driving seat, though – at whatever cost to its next console

Edge's most wanted

The glimmers of gold in the pan





Rally Championship

(DC/PC/PS) Europress

Developer Magnetic Fields has been working in the driving game field since the days of 16bit home computers. Its experience bodes remarkably well.



Final Fantasy VIII

(PS) SquareSoft

FFVII may have been one of the most-returned titles in UK game stores, but the sequel's appeal to those who appreciate Japanese RPGs remains buoyant.



Alone in the Dark 4

(DC/PC) Infogrames

Having kept its distance while Capcom exploited the genre it essentially created, Infogrames is set to return with a scarily atmospheric adventure.

Shadowman

(PC/PS/N64) Acclaim

The PlayStation version may lag some way behind its Nintendo and PC brethren visually, but the concepts at work remain irrepressibly sound.

Index





PRESCREEN ALPHAS

SEGA'S 128BIT BOX BOXES BACK INTO ACTION AMONG AN ECLECTIC COLLECTION

READY 2 RUMBLE BOXING

FORMAT: **DC/PS/N64** DEVELOPER: **MIDWAY**





















Midway's tongue-in-cheek boxing game naturally looks most impressive in its Dreamcast guise (shown). Gameplay is fast, mixing a variety of punching moves with beat 'em up-style combinations for hugely appealing thrills. Should you manage to spell out 'RUMBLE' during a match (a letter being awarded for every combo successfully landed), your character becomes a fighting demon possessed by pure rage, capable of delivering ever faster and more powerful blows. The simplicity of the game is undoubtedly one of its strengths, while its daft visual style ensures belly laughs throughout.

CASTLEVANIA RESURRECTION

FORMAT: **DREAMCAST** DEVELOPER: **KONAMI**













After an enjoyable, if significantly flawed, outing on the N64, Konami is set to exploit its vampire franchise further with a Dreamcast instalment. The game looks relatively proficient in graphical terms (even though these images have a slight whiff of 'mock-up' about them), but the news that it's being developed by Konami's America studio does not bode especially well, given its poor track record. Hopefully the legend's sheen is not about to be tarnished.



BATTLE TANX II

FORMAT: **NINTENDO 64** DEVELOPER: **3DO**









Although hardly *Wild Metal Country* in scale, *Battle Tanx II* looks well suited to the American heartland of the N64. The singleplayer game includes levels set in destructible versions of London, Paris, Berlin and Washington. And there are ten tank variants, including a vulcan-equipped scout, a hover tank and a rollable variant. However, the fourplayer mode looks to be the best, with capture-the-flag, deathmatch and protection options.

ALONE IN THE DARK 4

Shown in running video form at the centre of Infogrames' E3 stand, this Darkworks-developed sequel is coming to Dreamcast before it hits Sony's next-generation PlayStation. Some parts of the game look absolutely gorgeous, with realtime lighting effects washing over prerendered backdrops to tremendously atmospheric effect. It will be interesting to see how Capcom's *Resident Evil* series has influenced the game's production.





AIR FORCE DELTA

FORMAT: **DREAMCAST** DEVELOPER: **KONAMI**

Konami's first Dreamcast action title is, on the face of it, suspiciously close to Namco's *Ace Combat 3* (see p84), right down to its similarly styled map screen, but this air warfare title obviously looks more the part, with some exceptional modelling details. Compatibility with ASCII's new Flight Stick peripheral (see p136) should up the realism ante, too.









MDK 2

FORMAT: **DREAMCAST/PC** DEVELOPER: **BIOWARE**





MDK 2 promises to offer the dark humour that formed such a considerable part of its predecessor. This time, however, in true *Jet Force Gemini* style, you get the chance to control another two characters – Max the bionic dog and ageing Dr Hawkins – each with considerably different abilities, along with Kurt Hectic. Nine massive levels and over 20 enemies are promised, while a new colour scheme appears to offer a brighter view of otherworldly pleasures than previously.

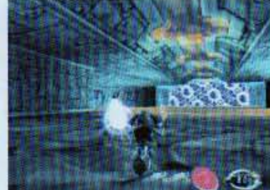










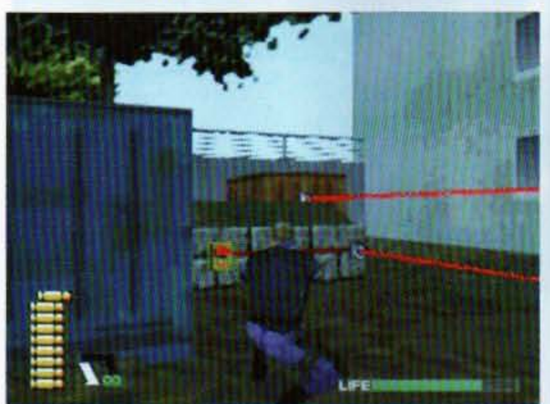


WINBACK

FORMAT: **NINTENDO 64** DEVELOPER: **KOEI**

After developing a raft of middling SNES wargames, Koei has forged something of a reputation on now-generation consoles – at least in graphical terms, titles such as *Destrega* looking especially slick. The company's N64 abilities remain largely untested, though, which makes *Winback* a title to watch. While the N64 ensures that environments are slim on detail, a set of complex character controls should make the game stand apart.








TRICK STYLE

FORMAT: **DREAMCAST/PC** DEVELOPER: **CRITERION STUDIOS**

Edge recently had the pleasure of witnessing the latest build of Criterion's hoverboarding game in its Dreamcast incarnation and is happy to report that the framerate – a point of some concern with the version at E3 – is now much improved. The PC equivalent, meanwhile, continues to impress. Here's hoping it's not all flash and no dash.





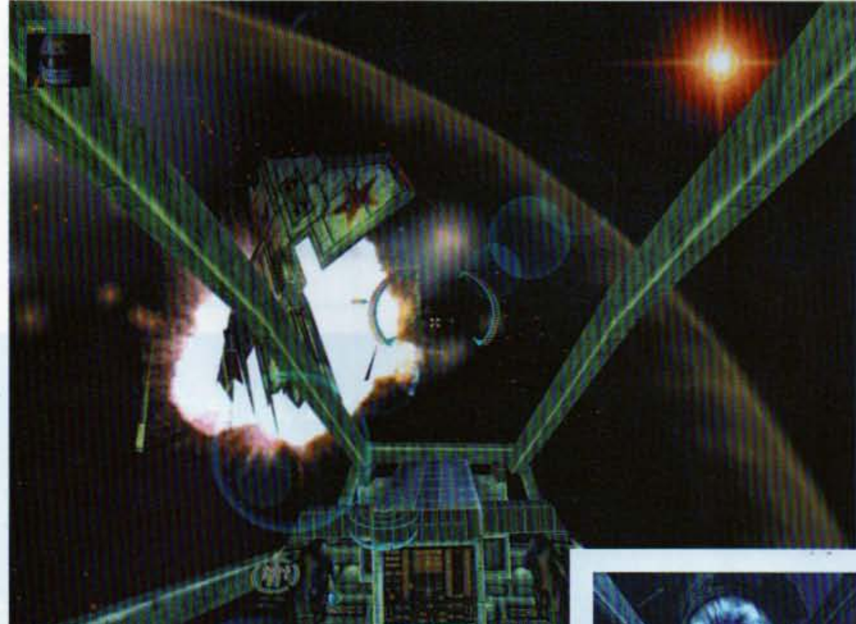




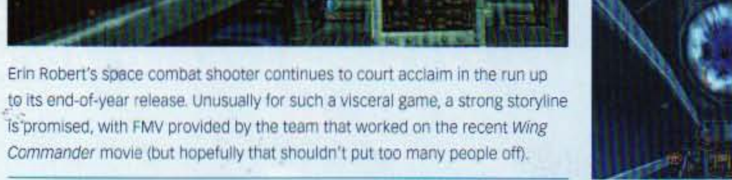


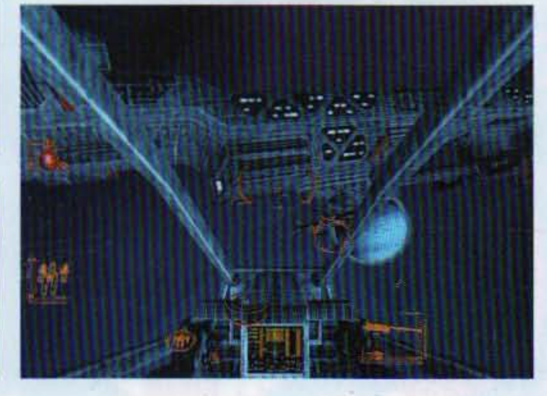
STARLANCER

FORMAT: **PC** DEVELOPER: **DIGITAL ANVIL**









Erin Robert's space combat shooter continues to court acclaim in the run up to its end-of-year release. Unusually for such a visceral game, a strong storyline is promised, with FMV provided by the team that worked on the recent *Wing Commander* movie (but hopefully that shouldn't put too many people off).

THRASHER: SKATE AND DESTROY

FORMAT: **PLAYSTATION** DEVELOPER: **Z-AXIS**









Quite why it's taken developers so long to latch on to the obvious appeal of simulated skateboarding remains a mystery. Now, however, two are set to turn up at the same time – Neversoft's Tony Hawk's-licensed game, and this, which carries the endorsement of *Thrasher* magazine. New York, San Francisco, Paris and London are available to hammer your trucks over, with the emphasis very much on realism – even the decks carry real brands.

GUITAR FREAKS

FORMAT: **PLAYSTATION** DEVELOPER: **KONAMI**

While it at first seemed unlikely to follow *Beatmania* from the arcade into the home – releasing a PlayStation turntable controller is one thing, while manufacturing a guitar controller for use in the home is quite another, after all – Konami has now confirmed that *Guitar Freaks*, its most recent Bemani title, will make the journey. Controls are simple, utilising a flickable thumb-switch and three 'chord' buttons, and a practice mode is included.





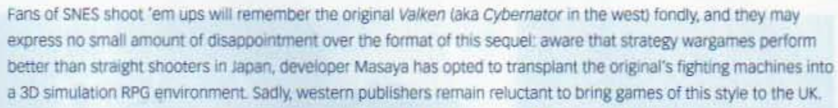




ASSAULT SUITS VALKEN 2

FORMAT: **PLAYSTATION** DEVELOPER: **MASAYA**





Fans of SNES shoot 'em ups will remember the original *Valken* (aka *Cybernator* in the west) fondly, and they may express no small amount of disappointment over the format of this sequel: aware that strategy wargames perform better than straight shooters in Japan, developer Masaya has opted to transplant the original's fighting machines into a 3D simulation RPG environment. Sadly, western publishers remain reluctant to bring games of this style to the UK.













TEST DRIVE 6

FORMAT: **DC/PC/PS** DEVELOPER: **ACCOLADE**

Given the company's propensity for releasing what is essentially the same mediocre product on a yearly basis, few gamers may actually care about Accolade's *Test Drive* series any longer. However, the prospect of the franchise hitting the Dreamcast (version shown) is enough to rouse interest.











RALLY CHAMPIONSHIP

FORMAT: **DC/PC/PS** DEVELOPER: **MAGNETIC FIELDS**

It was a given that Europress' forthcoming driving title was blisteringly quick, but a recent hands-on test of the PC version confirmed that its handling seems very much on track to match the impressive visuals for authenticity. Even when using keyboard controls the feeling of driving a rally-prepared vehicle is masterfully conveyed, especially when using the in-car view. The September release is therefore an alluring proposition.

















ASHERON'S CALL

Continuing the current vogue of online-only games, Microsoft's *Asheron's Call* is an epic PC RPG set on an island 24 miles square. Players can choose from six main character attributes and over 30 initial skills. Unlike *Ultima* or *EverQuest*, however, it has an allegiance system which encourages long-term players to look after newcomers, and administrators will actively work to advance the overall story, based on the action of the emerging online communities.





D2

FORMAT: **DC** DEVELOPER: **WARP**

It may have retreated gracefully from the limelight, but as these new screenshots attest, *D2* is continuing its relentless journey towards finished Dreamcast title status. No major gameplay alterations have been announced, yet graphically things appear to have reasonably improved. Further judgement has to be reserved until *D2* reaches reviewable stage.











CRUSADERS OF MIGHT AND MAGIC

FORMAT: **PLAYSTATION** DEVELOPER: **3DO**







Although well known to PC owners with a D&D bent, 3DO is banking that taking *Crusaders of Might and Magic* the 3D route will smooth its reception on the PlayStation. As they explore the mystical land of Ardon, players have to mix hand-to-hand combat with magic. And the large-scale environments which will need to be revisited should guarantee many hours of gameplay.

CODENAME: EAGLE

FORMAT: **PC** DEVELOPER: **REFRACTIONS**






Set in Russia around the early years of this century, this 3D action adventure has you take control of a special forces operative sent to infiltrate the Russian empire, with the aim of sabotaging a planned invasion of Europe by the new power-hungry Tsar. Played over 12 missions in either first- or thirdperson perspective within an interactive environment, you're able to use various land-, sea- or air-based vehicles to help you in your task.

SLED STORM

FORMAT: **PLAYSTATION** DEVELOPER: **EA CANADA**

One of the seemingly few PlayStation games from EA's sizeable range capable of mustering anything other than apathy, this snowmobile-based racing game attracted a fair amount of interest from hungry racing fans searching for something a little different at E3 in May. The usual 'different tracks, several shortcuts' approach prevails but the overall novelty of the action may just save the day, if not exactly assure it classic status.



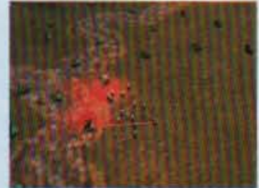





WARMONKEYS

Keen to add to its traditional portfolio of sports titles, Banbury-based Silicon Dreams is branching out into other areas of the videogaming field









Silicon Dreams claims that up to 200 units will roam around the levels. The prospect of more than a handful of Mantai creatures is a little unnerving

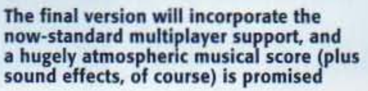
Chances are, you won't have heard of *Warmonkeys* until now. Looking at the screenshots, you'd be forgiven for labelling this another realtime strategy game and turning the page with a despondent sigh. But, as developer Silicon Dreams will stress, this isn't just another RTS title. It's an 'action tactics game'. You see, fed up with the initial period of inactivity as you build up your forces in traditional RTS offerings, the team has opted for an immediate hands-on approach. Hence, begin a level and your troops start with you, awaiting your immediate instructions. It makes this a very accessible experience to even the most noviciate of strategists. And this is the great promise harvested by *Warmonkeys*: the fact that it can be equally played by arcade gamers and RTS types, with similar results.

You may be interested to learn that the project started life as something very different. Initially called *Bloodline*, the concept revolved around the breeding and fighting of creatures. You'd select two different organisms and their mutant progeny would automatically be calculated and created by the CPU. In essence, it wasn't too dissimilar to Computer Artworks' *Evolva*. The real move towards what *Warmonkeys* is today came after the team married *Bloodline* to the idea of a tank game based around the concept of line-of-sight (not forgetting a significant amount of inspiration drawn from celluloid bugfest 'Starship Troopers' – see p140).

This latter feature has survived, and its significance in terms of gameplay is paramount. Unlike most strategy titles, the terrain's topography plays a decisive tactical role in the proceedings – you can only see enemy units if a member of your own forces can see them. Naturally, the line-of-sight is calculated for every CPU-controlled opponent, opening up the possibility for some major ambush potential. Similarly, you'll have to decide whether charging into a valley is a particularly good idea.

Three battling factions exist on each of the 45 sizeable levels: an elite force from earth





The final version will incorporate the now-standard multiplayer support, and a hugely atmospheric musical score (plus sound effects, of course) is promised





Format: **PC/Dreamcast**
Publisher: **TBA**
Developer: **Silicon Dreams**
Release: **Early 2000 (PC); TBA (DC)**
Origin: **UK**


Troops gain experience from battle as the game progresses. Place a veteran in a tank, for example, and you have a powerful combination


After a successful mission, you receive money with which to buy more units for subsequent missions. Aerial units are essential for pinpointing the enemy

Your troops can utilise a variety of weapons (machine gun, flame thrower, laser rifle, mines and mortars, for example), and you can always pack them into tanks and personnel carriers for swifter deployment – a wise move considering some of the levels offer up to 25 square kilometres of land. And these are not simple, barren landscapes. In addition to the canyon,

As **one of the human forces,** you have access to around **50 different types of machinery** with which to **annihilate the six types** of Mantai

known as the Imperial Order, specialising in state of the art technology and surveillance techniques; the Warmonkeys, which comprises a group of do-or-die mercenaries packing some heavy duty – if homemade – artillery; and the Mantai, the planet's indigenous creatures.

As the individual commanding one of the three, your objective is to regain control of the planet. Inevitably, each group has its own set of advantages and shortcomings – it's up to you to exploit the former to maximum effect. And as you'd expect, units can be grouped or controlled individually. If you're one of the human forces, you have access to around 50 different types of machinery with which to annihilate the six types of Mantai.

aquatic, and arctic-based environments, battles occur in dense urban settings, providing many opportunities for snipers on top of the various futuristic buildings, for instance.

One of the notable aspects of the game is the sense of scale conveyed. One minute you can be in thirdperson view of a member of an infantry unit (including a picture-in-picture display of the soldier's firstperson perspective – a nice touch and particularly useful for sniping) and the next have zoomed out to a distant top-down view, gazing upon ant-sized troopers running around with uncannily lifelike animation (motion-captured to the extent of different striding action, depending on terrain inclination). Being fictional beings, the Mantai may not have the benefit of motion capture, but their animation is no less accomplished.

It's difficult to fault *Warmonkeys* at this stage. Truth be told, most elements appear to be very much in place, and with a couple of months left to finish the product, Silicon Dreams is promising it will spend the time between now and the game's early 2000 release tweaking the gameplay. If only every developer could boast such luxuries...




A variety of terrain and weather effects for the levels require different tactical approaches. Thankfully, the control system seems intuitive


All of the game's effects, particularly lighting, are rather beautifully realised



EDGAR TORRONTERAS' EXTREME BIKER

Its developer reckons this will be the best acrobatic motorcross racing sim yet. And with inventive environments and trick-riding on the side, it promises to be a lot of fun, too







***Extreme Biker* has three separate game environments; outdoor motorcross, indoor supercross, and fantasy levels designed solely for performing tricks**



Eager to boost the game's image, Deibus has licensed Spanish MX heartthrob Edgar Torronteras' name

Format: **PC**

Publisher: **Havas**

Developer: **Deibus**

Release: **September**

Origin: **UK**

E3 is a tense business. Developers sweat out the weeks before crafting whizzbang demos to wow the crowds. At the show they bite their fingernails worrying about the industry's reaction. But it can be worse for developers not showing games.

"We started on *Extreme Biker* in spring 1998," explains producer **Daniel Bobroff**. "Then we went to E3, which was the most nerve-wracking time because you walk around thinking, when will I see the product that's going to make me feel sick? And, of course, we saw it – it was called *Motorcross Madness*."

When the Deibus team got back to London, then, it was time for a rethink. Now, a year later, it's a different story: "I walked around E3 this year and didn't see anything that came close," grins Bobroff. Indeed, Deibus has attempted to do something completely different here, and in this respect *Extreme Biker* is in a league entirely of its own.

It's not a straight racing game – in between genres it mixes the speed and powersliding of motorcross with a range of player-controlled stunts, all wrapped up in 25 free-roaming environments that, on occasion, are more reminiscent of classic platform levels than motorcross tracks. Take, for example, the James Bond-style Fantasy Island level in which you can jump on to the back of an airship...



One of the difficulties in development has been to craft a 3D engine that can cope with changes in players' attitude, as well as looking great

"We were attracted to the madness of the whole thing," enthuses Bobroff. "People get on these bikes and do jumps that catapult themselves 50 feet into the air. And when they're up there they do death-defying stunts."

Trying to model this behaviour does create some development problems, though. Not only







One of the key points of the game is that none of the tricks are scripted. Players will be in full control of the motion of both the bike and rider



Although billed as a realistic acrobatic racing sim, some *Extreme Biker* levels seem to be inspired by platformers, as this *Mario 64* snowman clone shows

The team believes that the crashes are going to be as much fun as both the stunts and racing. This is partly due to the way control switches when the bike is in the air. Racing on the ground is a simple case of using the directional keys, accelerator and brake, but when you jump, the bike can be rotated in all three axes, and landing isn't a skill you can master in a few minutes. (Interestingly, each rider is modelled separately, so the inevitable slams are different every time.)

As in reality, if you **haven't got the balance point** quite right when pulling a simple wheelie, **the physics will tip the bike over**

must the bikes and riders be modelled realistically, but the interaction between them is paramount. Unlike *Motorcross Madness*, performing stunts is not simply a matter of pressing a button and watching a scripted animation – you have to balance the rider's weight to execute a perfect trick. And this is no mean feat, either. As in reality, if you haven't got the balance point quite right when pulling a simple wheelie, the physics will tip the bike over. Anything that's therefore technically possible with a real-life motorbike can also be achieved in the game, only you're spared the worry of broken bones.

But if the learning curve is steep, the development team doesn't seem too concerned. You need to be good to get the rewards the game can offer, but the rewards are worth it. The finished version should be well structured, though, to help you adapt to the various riding styles, and players will initially ride a bike that is autostabilised when it leaves the ground.

Delbus is hoping that *Extreme Biker* will ultimately be as much about image as winning races. Which is why, when it went for a licence for the title, it decided on the Spanish golden boy of motorcross. Although little-known in the UK, Edgar Torronteras is the Robbie Williams of the European circuit. "Not many people knew who Colin McRae was before Codemasters got hold of him," reasons Bobroff. And while **Edge** is yet to be convinced on that particular point, Torronteras seems certain to raise the game's profile on the continent. For the rest of the world, Delbus will have to rely on the fact that people enjoy jumping motorbikes on to airships.



While realistic physics are crucial, some of the game levels are quite bizarre









There are many different surfaces to race on. The 25 levels feature sand, mud, grass and ice tracks

EVERYBODY'S GOLF 2

SCEI brought unparalleled humour and user-friendliness to the golf game with its first stab at the genre. Now it hopes to build on that success with another comic-book pitch and putter

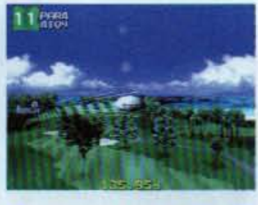


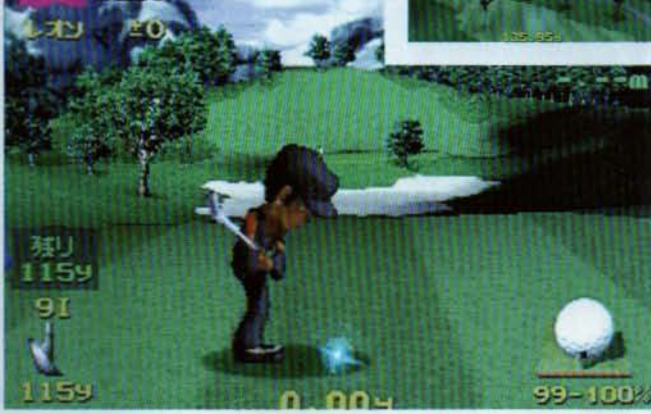
A little more authenticity is assured, but the great playability of the original promises to make a return











Like its predecessor, SCEE will release *Everybody's Golf 2* in the UK, although substantial changes are to be made to the European version

Format: **PlayStation**

Publisher: **SCEI**

Developer: **In-house**

Release: **July (Japan)**

Origin: **Japan**

In hindsight, the original *Everybody's Golf* was an inspired move – a golf game designed not as a po-faced, visually authentic reproduction of the sport, but as an approachable, cutesy knockabout. It attracted not only the salarymen obsessed with the real-life pastime (unbelievably huge in Japan), but also young gamers put off by more earnest US and UK sims. SCE sold nearly two million copies of the game in Japan, 210,000 in the US and 70,000 in Europe. A sequel was inevitable.

Given the innovative nature of the original, it isn't surprising that the 15-man team behind the second game is doing more than just updating the visuals. "Graphically, the game has really improved, but graphics aren't enough," argues executive producer **Yasuhide Kobayashi**. "So we added the season parameter. In summer, for example, the rough will be deep and it will be difficult to get at the ball, while in winter the wind will be strong and the rough low. But that's only one of the innovations."

More important, perhaps, is the increased strategic variety of the sequel. As in the first title, each of the (now 13) characters has his or her own strengths and weaknesses, but here it's also possible to collect five different club sets and six ball types throughout the game, depending on your performance in each tournament. Some of these are good for spin, some for distance, so you get several different combinations, inviting lots of different approaches to each round depending on which character, club set and ball you go for. "More than before, players will have to think about how and where to hit the ball," confirms Kobayashi-san. "This time you'll enjoy building your own strategies."

So *Everybody's Golf 2* looks to be a slightly more grown-up foray into the world's worst-dressed sport. The visuals have lost some of their comic book influence and the gameplay is more demanding, with a greater emphasis on accuracy and timing. Hopefully this will not detract from the original's main appeal and its eponymous selling point: the fact that absolutely everyone could play.





In addition to the many new touches concerning play mechanics, graphics have also improved

DRAGON SWORD

Outside of Rare, the UK is hardly a hotbed of creativity for original, N64-only titles, but Interactive Studios is keeping the faith, as this wild slashathon demonstrates



A variety of weapons and magic spells become available throughout the game, adding an important element of character progression



The player must do battle with various orc-like foe. Fortunately, the fighting system is intuitive yet comprehensive, utilising attack and defensive moves

Picture the arcade classic *Gauntlet* given a *Fighting Force* 3D makeover and plunged into a storyline plundered from every RPG imaginable. This is essentially the prospect offered by *Dragon Sword*, a thirdperson action adventure from the creators of curious N64 platformer *Glover*. Here, two warriors must do battle with a dark sorceress and her army (or 'Darrc horde' as they are referred to in the game) to free the land of Avantaria from evil. Not the most interesting of storylines, then, but what can you expect from the RPG genre that has thrown up few new ideas since the late '70s?

Fortunately, the gameplay looks more promising than the plot. Players can choose to take part in either a singleplayer or cooperative twoplayer quest, both of which lead you through ten levels of hacking, slashing and puzzle solving. The ultimate aim is to find all the pieces of the legendary dragon sword, but along the way you'll meet various low-level monsters such as dogmen, scavengers, zombies and insect warriors, as well as several end-of-level baddies. From the demo **Edge** has played, the combat system seems fairly intuitive, allowing for defensive moves and parrying as well as a variety of attacking blows. You can also collect spells and power-ups along the way to add an element of progression to the character stats.

In terms of visuals, Interactive Studios seems to have done a decent job with its RPG remit. Caverns, castles, wooden warships and forests pave the route, all craftily detailed and moodily lit. The characters are impressive, too – inspired perhaps by D&D art, they are almost as chunky and imposing as the swords they wield.

Ultimately, though, the twoplayer approach to a familiar, proven genre will stand the title apart. If the gameplay is finely tuned and the levels made suitably diverse, this could give a much-needed boost to the N64's sickly release schedule. There's even a fourplayer deathmatch option and a time-trial slay-fest planned, which will extend those gameplay possibilities yet further.





***Dragon Sword* takes in all the usual RPG hang-outs such as galleons and quaint villages. Fear not, spooky caverns crop up, too**



Magic plays an important role in the game, accompanied by great special FX

Format: **Nintendo 64**

Publisher: **MGM Interactive**

Developer: **Interactive Studios**

Release: **Christmas**

Origin: **UK**

VIRTUAL-ON ONTARIO TANGRAM

Sega's cult Gundam-style shoot 'em up strides on to the Dreamcast, equipped with impressive online support and some rather stunning visuals











AM3 has fully exploited the special effects-friendly Dreamcast to produce some staggering explosions. Mech war has never looked better





Huge robots and epic arenas: *Virtual-On Ontario Tangram* retains the manga look of its predecessors to formidable effect

While the west centres its attention on Sega's more obvious offerings – its *Virtua Fighters*, its hedgehogs, etc – hardcore gamers in Japan are still hooked on a less-visited franchise. *Virtual-On*, a Gundam-themed shoot 'em up featuring soldiers in huge robot assault suits, has been an arcade staple since 1997, receiving numerous updates and a decent Saturn conversion. The only problem with the latter was its poor twoplayer splitscreen mode – a significant deficiency, as *Virtual-On*'s best feature is its head-to-head battles.

Which is where Dreamcast *Virtual-On* comes in. Based on version 5.4 of the coin-op, the title will feature two online gaming modes, allowing home users to indulge in fullscreen player-vs-player battles for the first time. The Edge User mode is for newcomers to the game and offers simple fixed rules: fights are limited to 80 seconds and the game finishes when one player wins two rounds. No customisable settings are included – players simply get online, pick an opponent and start playing. In Heavy User mode, players can alter the time limit of each bout, select the stage, and talk to each other via a realtime chat system. A kind of View Mode is also available so Dreamcast users will be able to watch championship battles on their TV.

Content-wise there are 12 different mobile suits to select, each with their own long- and short-range weapons. Faithful to its arcade predecessor, the Dreamcast version also includes the Double Lock-on feature which uses two different radar targetting systems to pick at long-range and close-range enemies. Finally there's the Turbo Dash, giving players a short burst of speed should they need to escape quickly or make a surprise attack.

As for visuals, expect as much detail as the beautiful Model 3 arcade version. Naturally, all weapons are accompanied by amazing explosions, utilising Dreamcast's huge colour palette to the full. Apparently the effects even differ depending on the type of object or landscape the missiles hit.

This will certainly be the most comprehensive use of the Dreamcast's modem facilities to date, and will therefore provide a yardstick for any subsequent multiplayer titles. Given the fact that violent conflict seems to have become the gameplay feature of choice for the online generation, Sega certainly seems to have its head screwed on in making *Virtual-On* its flagship Net title.

Format: **Dreamcast**
Publisher: **Sega**
Developer: **AM3**
Release: **July (Japan)**
Origin: **Japan**





Long- and short-range weapons are directed with two different radar lock-on facilities

TOSHINDEN SUBARU

Four years ago, *Toshinden* marked an impressive beginning to the PlayStation's beat 'em up story. Takara hopes the fourth instalment will make an equally impressive ending





This time around the characters may look heavily influenced by those from the second game, but a manga-esque quality in their appearance is clearly evident

As ever, special moves adorn a combatant's fighting repertoire and some of the more health-sapping techniques are visually imposing

Format: **PlayStation**

Publisher: **Takara**

Developer: **In-house**

Release: **Summer (Japan)**

Origin: **Japan**

Before *Tekken*, before *Soul Blade* and long before *Street Fighter Alpha*, it was *Toshinden* which brought the beat 'em up to the PlayStation. As one of the machine's launch titles in Japan, Takara's 3D fighter provided a compelling showcase for the 32bit age – not bad considering Takara is a toy firm before a game developer. Unfortunately, two subsequent sequels failed to match the glorious *Tekken* series for visual brilliance and sheer gameplay, and Takara was written off as an also-ran in the race in which it enjoyed a head start.

Now Takara is back with a new game and a cast of nine completely new characters, as well as a few hidden ones, naturally. Apparently when Takara attempted to market toys based around the old bunch, sales were so surprisingly poor that they've all been ditched – a potent signifier of the importance of merchandising in this day and age. If anything, the fighters here are closest to the cast of *Toshinden 2* in terms of design, but with a stronger manga feel. They're also slightly more blocky than the inhabitants of the latest *Tekken* bash.

In gameplay terms, Takara has a few tricks up its sleeve. Among the options is a team mode (perhaps influenced by *King of Fighters'* team battle system) where each player selects three fighters to take part in the action. The main option is the story mode, a kind of linear arcade affair intercut with manga scenes and fleshed out with seven mini-games. Survival and practice modes are also included, along with time attack and the standard VS option.

Perhaps the most interesting addition is the ring-out battlefield. As in the original title, several of the arenas allow you to throw opponents out of the fighting space, thereby killing them instantly. Now a number of rings actually increase and decrease in size during the bout, adding an interesting random element. Takara certainly needed a few of its own ideas if it was going to stand a chance against the all-conquering *Tekken 3* – whether a pulsating ring will be enough is anyone's guess.



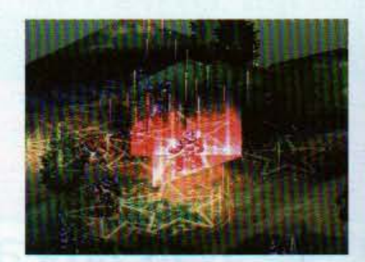


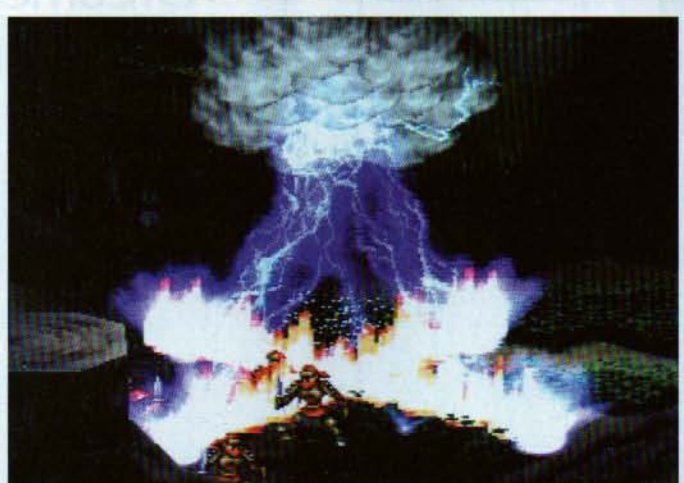
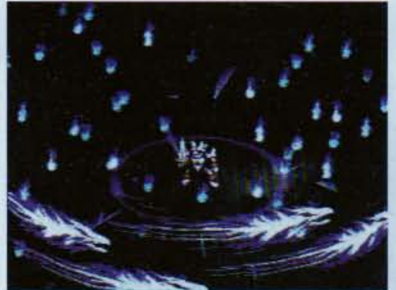


The dynamic camera of the series' previous instalments makes a return, ensuring the most dynamic angle is constantly displayed

VANDAL HEARTS 2

New story, new battle system, less linear structure, glorious special effects: Konami's combat RPG resurrects itself in style for the post-*Final Fantasy VIII* generation





If it decides to release the game in Europe – and the company can hardly be blamed for deciding not to – Konami will be hoping that this much-improved sequel is better received by the western RPG-playing community than its predecessor




The combat system is one of this sequel's key areas to have had significant changes implemented

There are some gamers who believe the original *Vandal Hearts* – a turn-based RPG, criminally overlooked in Europe – is one of the best PlayStation titles available. The gameplay is in the stripped-down *Final Fantasy Tactics* style (ie, based heavily around combat rather than exploration and adventure), and features some great characters, absorbing tactical depth and a pretty passable story.

For this long-awaited sequel, Konami has sensibly stuck within the war/strategy RPG subgenre, but has made a few key modifications. Now, instead of a completely turn-based battle system, both the player-controlled characters and the computer-controlled opponents move into their fighting positions simultaneously. From here, though, the game reverts to a turn-based system and the fighters with the fastest character stats begin their attacks first (an element borrowed from Quest's *Tactics Ogre*). It's an interesting modification, forcing the player to think quickly about where to place his units, taking into consideration factors such as unit type, stamina, magic and strength.

Indeed, much has been done to add even further depth to the franchise. Which character gets to fight first is not simply down to character stats; weight also comes into it, too – so if you want to ensure your units start the fisticuffs first, you have to arm them with the lightest weapons and armour. Plus, the scenery plays a crucial part in your combat decisions: if you have the high ground, for example, select bows and arrows as your key weapons and you'll have much greater range. It's realistic stuff.

On top of the battle system changes there are more obvious visual and plot-based improvements. The background locations are less chunky and more atmospheric, while the magic effects (there are apparently around 100 different spells) are allegedly breathtaking. With a completely new storyline (the main character, Yoshua, is a warrior seeking his lover, Adel), and a less linear structure, *Vandal Hearts 2* should appeal both to veterans of the classic original, and newcomers looking for more mentally demanding fare than the PlayStation usually offers.

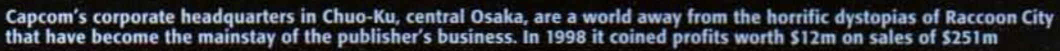
Format: **PlayStation**
Publisher: **Konami**
Developer: **In-house**
Release: **July (Japan)**
Origin: **Japan**

keeping the nightmare alive

When *Resident Evil* first spattered across PlayStation screens, it didn't redefine the horror genre – it was a bloody milestone. With the second sequel on the way, **Edge** looks to the future with series originator Shinji Mikami and Keji Inafune, producer of latest spin-off, *Onimusha: Demon Warrior*





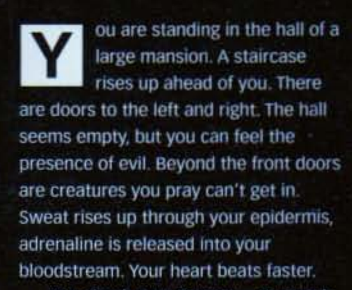


Capcom's corporate headquarters in Chuo-Ku, central Osaka, are a world away from the horrific dystopias of Raccoon City that have become the mainstay of the publisher's business. In 1998 it coined profits worth $12m on sales of $251m





***Resident Evil: Nemesis* sees the return of Jill Valentine from the original title. Other playable characters will become available at various key points throughout the game**



You are standing in the hall of a large mansion. A staircase rises up ahead of you. There are doors to the left and right. The hall seems empty, but you can feel the presence of evil. Beyond the front doors are creatures you pray can't get in. Sweat rises up through your epidermis, adrenaline is released into your bloodstream. Your heart beats faster.

You check your Beretta – 15 rounds left. You turn to walk through the door to the right and the sound of your feet clicking on the hard floor makes the hair bristle on the back of your neck. You turn the handle of the door and wait as information streams off the black disc. You enter the room. The last sound you hear is a window breaking as a dark shape leaps in...

You have just left the world of survival horror.

Hyping horror

If fear is the strongest emotion, then the *Resident Evil* series encapsulates the visceral impact of videogaming like no other game style. Forget the hype of Sony's next-generation processor heralding a different level of emotional interaction. Anyone who has played one of **Shinji Mikami**'s games will be aware how high the benchmark is already.

And while some of this power results from the popularity of shock-horror, there are more subtle reasons for its success. *Resident Evil* may be viewed from a thirdperson perspective, but one of Mikami-san's killer moves is to assimilate the 'I' of the player into the 'you' of the onscreen character. When the zombies attack, it's personal.

If proof were needed, then, that there's nothing people like more than to be scared, it comes courtesy of the four million *Resident Evil* units sold to date. Not only has Mikami-san been instrumental in restructuring Capcom from its 2D beat 'em up past, he's also played a large part in ensuring that Sony's PlayStation is still outstripping sales of every other console in its homeland. And, as the producer of forthcoming titles *Dino Crisis* (see **E**71) and *Resident Evil: Nemesis* (entitled *Bio-Hazard 3: The Last Escape* in Japan), he looks certain to continue to push the console's envelope.

Also charged with the task of overseeing *Bio-Hazard: Code Veronica* for Dreamcast, and a secret project he pointedly refuses to talk about at this stage, it's hardly surprising that Mikami-san appears overworked. "People call me on my mobile phone when they need me. That's why I've lost so much weight," he jokes.

Sequel or clone?

In such a pressurised situation, the temptation to make the same game over and over again must be overpowering. After all, nothing breeds stagnation like success. But, despite the fact that it uses the same game engine as the previous titles, *Nemesis* has the potential to be something more than a run-of-the-mill sequel.

Much of this is due to the plot development: the two *Resident Evils* released already make up a gripping narrative. After all, there are now four main characters, including one set of lost siblings. And if the plot of the latest episode takes a slightly lateral turn in terms of personal character choice, players are as interested in the shadowy Umbrella organisation as in who's doing the uncovering. The scenario writers may not have planned it this way, but they have nevertheless ended up with a rich seam of emotional history to utilise in the future.

One of the more intriguing problems forced upon the team when the project



Unlike previous incarnations, the action in *Nemesis* is not located within a building complex – it uses the whole area of Raccoon City



As in *Res Evil 2*, an indestructible foe will stalk Jill Valentine throughout the game. But, unlike the original bogeyman, this enemy is fast-moving







Inspired by the liquid-metal T-1000 Terminator, Jill's pursuer has the ability to deploy weapons such as a bazooka (above). It will also disappear at will

began in August was that, whether they wanted to use them or not, the characters from *Bio-Hazard 2* weren't available to them.

"When we started to think about the characters, Claire was already appearing in *Code Veronica*," reveals Mikami-san. "The only suitable character remaining was Jill."

(Incidentally, it will be fascinating to see how many Japanese *Bio-Hazard* fans buy a Dreamcast console specifically to find out what happens to Claire as she travels to Europe in search of her brother Chris Redfield, who, along with Jill Valentine, was the star of the opening episode.)

Because of these practical restrictions, *Nemesis'* timeline is somewhat complex. The game starts in the hours prior to the zombie outbreak that kicks off *Res Evil 2*, but then Jill is knocked out as Leon and Claire are introduced into the action. She then regains consciousness at the point that *Resident Evil 2* concludes. Still with it?





***Nemesis'* timeline is complex: it starts prior to *Resident Evil 2*, only to stop when Jill is knocked out as Leon and Claire enter the city. It then reconvenes where *Res Evil 2* ends**



One key control addition is a 180-degree button for instant turning

A hardcore title

Rather than taking place in and under the police station, *Nemesis'* action is played out on the streets of Raccoon City. "The purpose of the previous *Bio-Hazard* was to escape from a building," Mikami-san explains. "By using the city area, different types of environments can be introduced."

Less claustrophobic locations shouldn't result in a dilution of the game's characteristic tension, though. "*Bio-Hazard 2* was for the mass market," Mikami-san says, when asked about the genesis of the title. "*Bio-Hazard 3* is dedicated to hardcore gamers, people who really like action games."

Zombies remain the main source of cannon fodder, and if their AI hasn't improved it's because they're not designed to be smart. They have gained the ability to climb stairs, but the major change is in their quantity, not quality.

> **"*Bio-Hazard 2* was for the mass market, *Bio-Hazard 3* is dedicated to hardcore gamers, people who like action games"** Shinji Mikami, producer

"Up to nine zombies will appear at the same time," Mikami-san enthuses, expressing visible glee at the thought. "People will fear the feel of the zombies attacking." This more action-oriented style of play has thus resulted in a new control feature. "We implemented a 180-degree turn feature, so players can turn instantly," he adds.

There is also a new enemy to contend with – inspired by the liquid-metal T-1000 from 'Terminator 2'. Similar to the indestructible bogeyman that stalked Claire in *Resident Evil 2*, it will

Head swordsman



Onimusha producer Keiji Inafune also worked on the *Mega-Man* series and *Res Evil 2*

pursue Jill throughout the game. But unlike that cumbersome hulk, it will travel at high speeds, making for a more formidable foe.

"This character will follow you in certain stages and disappear. You will wonder where he has gone and then he will reappear suddenly," Mikami-san reveals, highlighting what is sure to be another classic set-piece.

Mikami-san's love of cinema is probably only matched by *Metal Gear Solid*'s Hideo Kojima. Both his positioning of the camera and the way he controls the overall pacing is directly influenced by film. Cut-scenes are therefore particularly important. And while George A Romero's zombie flicks act as a foundation, there are other more subtle precursors. Mikami-san singles out the last scene of 'Jaws' as an example.

"When the shark has the oxygen tank in its mouth and the main character shoots to make it explode, it's a very exciting scene," he says. "Many elements from such films have been included in *Bio-Hazard*." He isn't just referring to the obvious giant alligator scene of *Resident Evil 2*, either. Even details as seemingly minor as the way the zombies' heads explode can be traced back to inspiration from specific cinematic moments.

Divide and conquer

With *Nemesis* expected to shift nearly two million units worldwide, Capcom is looking for success beyond the confines of the series. The drive for the future is to use the essence of *Resident Evil* and twist it in new ways. The results so far are the promising *Dino Crisis* and *Onimusha: Demon Warrior*.

"From a company point of view, all titles are important," suggests Mikami-san. "Personally speaking, I prefer *Dino Crisis* because it is a new challenge. There are some limitations developing *Bio-Hazard* titles, but these don't exist in *Dino Crisis*."

The same is true for *Onimusha* producer **Keji Inafune**. "The purpose of *Onimusha* was to create a game where players can use the abilities they have built up while playing *Bio-Hazard*," he initiates. A veteran of the *Mega-Man* series, Inafune-san also worked on *Res Evil 2*, as did the key players in his 30-strong team. Initial work on the project started a year ago, with actual development beginning eight months ago.

"The purpose of *Onimusha* was to create a game where players can use the abilities they've built up playing *Bio-Hazard*" Keiji Inafune, producer

The brief is a tricky one, though. *Onimusha* must not alienate the mainstream fans of the series but be distinctive enough to quell hardcore criticism of it as a clone title.



Although it's using the same engine as *Resident Evil*, *Onimusha* is a more action-oriented title: think more swords, less puzzles

Inafune-san is quite forthright on this particular subject. "There are no good clones. Every company has failed," he says, dismissively. "The clones may look like *Bio-Hazard* but their content isn't good. Unless people understand this they won't be able to make a good copy."

One obvious new distinction for *Onimusha* is its setting. Based 400 years ago in the Sengoku era of Japanese history, it takes place in the region around Inaba Castle, after it was captured by the historical figure of Nobunaga. Rumours circulated by the surrounding population credited him with demonic power, giving the title its edge: 'Onimusha' means 'demon warrior' in Japanese. It falls to protagonist Akechi Samanosuke to rescue the captured princess from the castle, while a mixture of enemy troops and evil creatures stand in his way.

Despite its unmistakable Japanese setting, *Onimusha* is being designed to continue *Resident Evil*'s global success. "I want to show a Japanese type of game to foreign players, and I would be very proud to sell more abroad than in Japan," asserts Inafune-san. As Capcom estimates that, when it comes

Zombie king



Shinji Mikami is producing *Dino Crisis* and *Resident Evils Code Veronica* and *Nemesis*

Resident Evil: Nemesis

Format: PlayStation

Publisher: Capcom

Developer: In-house

Release: Winter (Japan)

Origin: Japan





A love of the movies is a crucial inspiration for both Mikami-san and Inafune-san. 'Alien' and 'Jaws' are big favourites, while Inafune-san also looks to anime and the films of Akira Kurosawa for inspiration

Onimusha
Format: PlayStation
Publisher: Capcom
Developer: In-house
Release: Early 2000 (Jap)
Origin: Japan

to *Resident Evil*, the ratio of Japanese sales versus the rest of the world is around 1 to 3, he might be in trouble if that's not the case. But unlike the English-voiced, Japanese-subtitled *Bio-Hazard*, native speakers, in Japan at least, will provide voices for *Onimusha*.

Capcom has underlined the high profile nature of the title with a licensing deal that sees charismatic film star Takeshi Kaneshiro, best known in Europe for his role in 'Chungking Express', lend his face to Samanosuke.

"We had the idea to make the main character like Kaneshiro from the beginning," explains Inafune-san. "When we contacted him he showed a lot of interest, so instead of creating a character that looked like him, we created one that was exactly like him."

Another expensive development detail has been hiring a full symphony orchestra to provide the soundtrack. This was another of Inafune-san's wishes, to add to the blockbuster-type feel of the game: "Graphics and gameplay are not everything. I wanted to significantly improve the music."

Direct action

"In *Bio-Hazard* the main character is always running away," he complains. "We don't want the players to have to escape or shoot from afar, but for them to use a sword to attack enemies at close range." Inafune-san also mentions that there will be a time limit imposed to maintain the speed of the action. However, he still places the game in the action-adventure camp. Other action games in development, such as *Tenchu II* and *Sword of the Samurai*, aren't viewed as competitors. The only rival *Onimusha* has, in Inafune-san's mind, is *Bio-Hazard* itself.

The main difference between the titles won't be the indigenous location, but the combined effect of various underlying gameplay elements – the close proximity of enemies because of the swordplay element, for example. Moreover, the variety of enemies will be increased. "There will be approximately 20 different types of enemy, and on top of that you will have the bosses," Inafune-san reveals. "Enemies will look evil, as if they come from Hell – some will be really weird."

Another facet of *Onimusha* is the introduction of magic. Akechi will wear a talisman on his forearm that will allow the use of magic attacks. Akin to Claire's grenade launcher in *Resident Evil 2*, its effects will be more powerful than standard attacks, but replenishment will be harder to find.

Inafune-san explains that the team is also considering whether to add water- and wind-based spells to the fire and thunder options. Another possibility is to have different levels of spells, as this has already been decided upon for sword attacks. "The most difficult thing for us to achieve will be the balance between the sword and the magic," he admits.

Sizzling swordplay

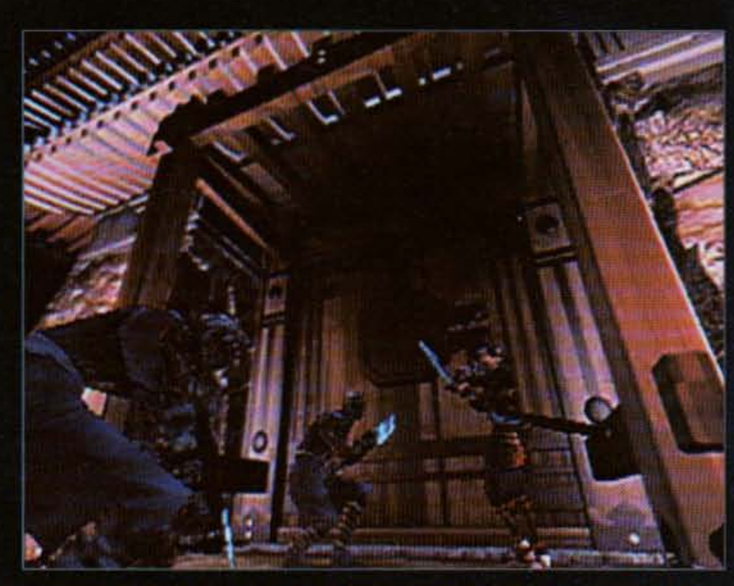
Whatever balance is set between the two offensive modes, the katana will remain the basic weapon. Many varieties will be available during the game, from extremely long blades to more exotic weapons, such as occidental swords. "We don't want players to be fed up of using them," explains Inafune-san.

Magic can be used in defensive ways, too. "In *Bio-Hazard*, when you enter a room and kill a zombie, it will remain dead. In *Onimusha*, we are presently considering whether to make the enemy reappear even after you have killed it," Inafune-san says. "In order to stop them coming back, you have to collect an Ofuda charm." The extension of this is, the more charms you collect, the greater your protection from the enemy creatures becomes.

Even fans of *Resident Evil* will admit that one of the weaker elements of the game were the puzzles. They are therefore being downgraded in *Onimusha*: "Puzzles are not a cool part of the game. We need to protect the cool part of the game," Inafune-san adds swiftly.

But cool or not, it seems unlikely that *Onimusha* will generate the same excitement as *Resident Evil*. Mikami-san's *Dino Crisis* seems the more genuine horror offspring. Still, only a fool would bet against *Resident Evil 4: Showdown*, *Dino Crisis 2: The Lost World* and *Onimusha 2: Demon Blade Returns* appearing on a next-generation console before 2001. Like the undead, some games just can't be killed off. And in the world of survival horror, that's the bottom line for Capcom and Sony. E

The main difference between the titles won't be the indigenous location, but the combined effect of underlying gameplay elements

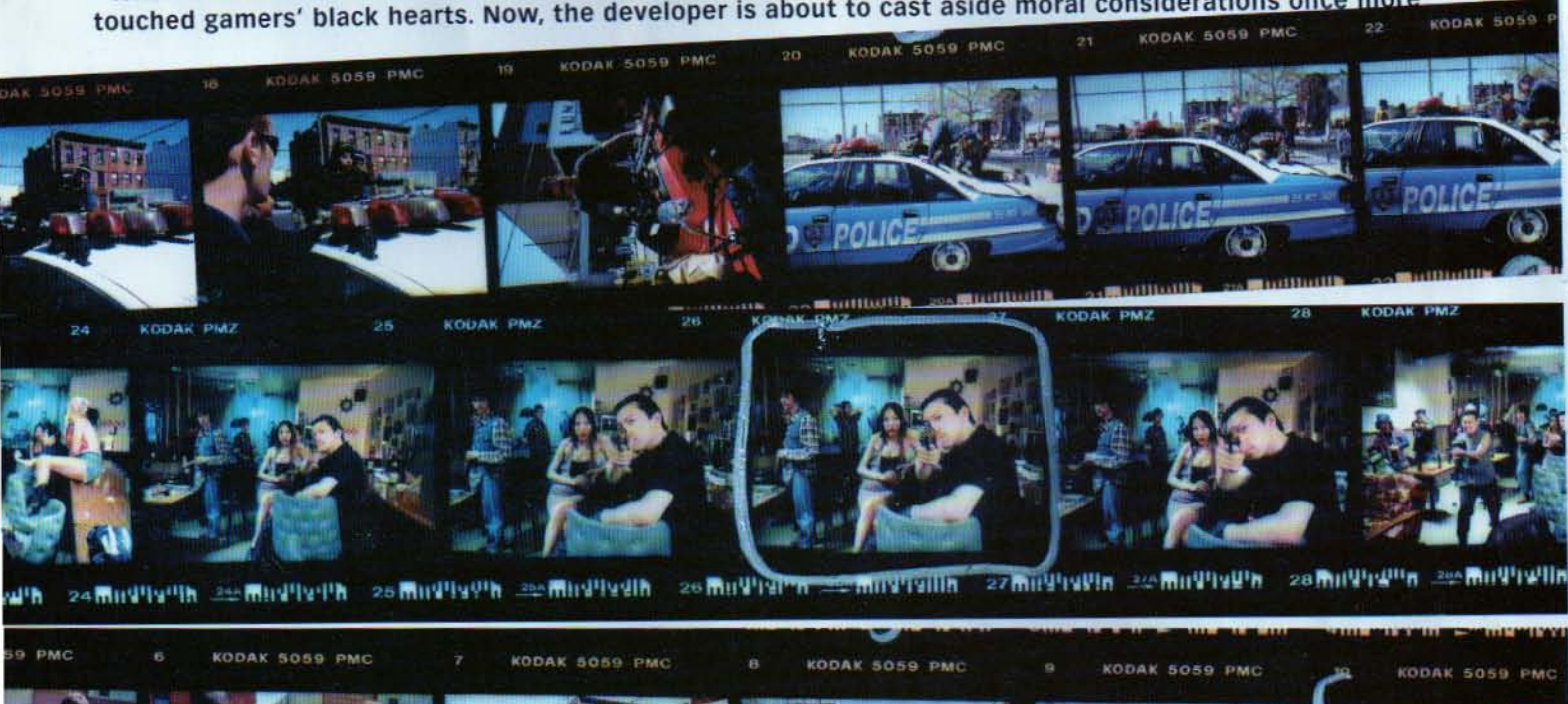


Interestingly, *Onimusha* isn't about running away from zombies. Instead, it has a much more aggressive quality, demonstrated by the close-quarters combat

GrandTheftAuto2



When *GTA* soared to the top of the charts, DMA knew that its recipe of violence, crime and anarchy had touched gamers' black hearts. Now, the developer is about to cast aside moral considerations once more



Format: **PlayStation/PC**
(PC version shown)

Publisher: **Rockstar Games**

Developer: **DMA Design**

Release: **TBA**

Origin: **UK**

We wanted to treat the original like Steve Austin and make the sequel like the 'Six Million Dollar Man'," says **Sam Houser**, the very slightly hyperactive executive producer on Rockstar Games' most anticipated title to date. "Every aspect of the original game has been analysed, evaluated, and torn apart – the bits we liked have been rebuilt, bigger, stronger, better – more manly, if you will – while the bits we didn't like have been discarded. The four fundamental guiding principles that we used on the original – fast and frantic gameplay; a top-down perspective car-chase theme; a massive, interactive city; and incredible driving music – remain in place. Beyond that, everything is different."

It's clear that *Grand Theft Auto 2* is worlds apart from the nature of the recent *London 1969* mission pack. From the outset, one particular element is especially clear: it positively teems with pedestrians. "On the PC, we're technically able to





Because of the vast number of *GTA* vehicles circulating on the Net, DMA decided to go for a completely new look for the sequel. The results are extremely stylised cars with a distinct 1950s feel, but with futuristic leanings



According to Sam Houser, the game is set slightly in the future – "anywhere between three hours and three years"



display up to 100 characters onscreen at once," says Rockstar's 'minister of information', **Dan Houser**, "although it's hard to tell exactly, because each character is actually doing something – they don't hang around waiting to be counted! On the PlayStation the number is around 40, which still gives the impression of a packed street or city square. Pedestrians are much more of a feature in this game than the original, with both innocent bystanders and fellow wrong-doers on the streets – however, as we can also get a lot more cars on screen as well, the feeling is one of a massively overcrowded, tense urban environment. We'll be able to have proper traffic jams, as well as crowded pedestrianised precincts – and deserted industrial zones, by contrast – giving a much more rounded feel to the city."

The outside favourite

The original *GTA* shouldn't have been an enormous success, of course – not in today's climate. It was an original title, it had an unfashionably 2D feel and, in its PlayStation incarnation, it was rough around the edges, to say the least. Perhaps it was Jeremy Paxman debating the game's morals on 'Newsnight'. Perhaps it was Take Two's marketing campaign. Whatever the case, it lured a mainstream following strong enough to make *London 1969* a chart topper and a hardcore fanbase which designed scores of new cars for distribution via the Net.

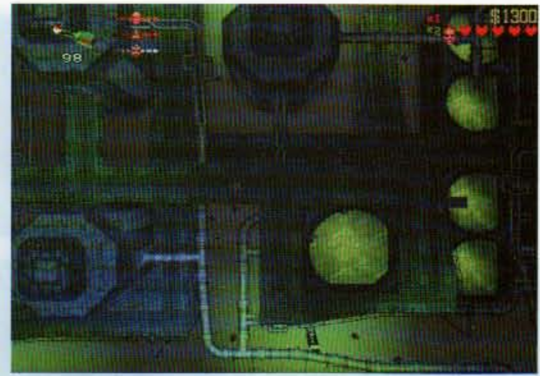
With *GTA2*, DMA is promising to deliver more of the same plus a healthy slab of extras – and to handle the console conversion properly this time. "There's only so much more you can do with two years' advancement in technology," says producer **Colin MacDonald** at DMA Design, "and for PlayStation we're dealing with exactly the same technology as the original. So, while we'd love to have a bash at a fully 3D environment with high-poly count vehicles, complex AI, tons of people and cars onscreen, intricate missions and fancy effects, it's just not going to happen. Well, not at the moment, at least.

"The single biggest difference with this sequel is that everyone works within gangs. And the entire game hangs on respect – if you don't have any, you won't be doing any missions. We massively



The sombre sequel is illuminated with some fabulous realtime lighting effects – you can even see blue-and-red lights hitting buildings as police approach





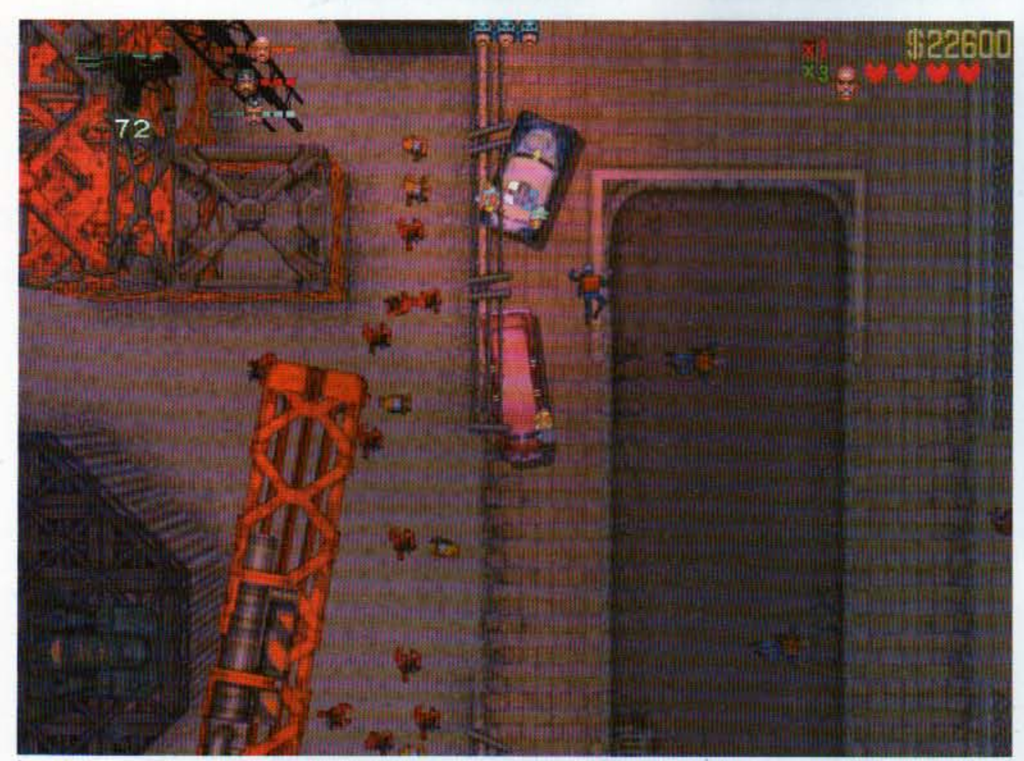
Three areas – Downtown, Residential and Industrial – make up the game's enormous map. Within each area, several further districts exist, each themed around their residents – the Redneck gang is holed up in a trailer park, for example

"The beauty of the game is that none of the missions are predetermined – you get instructions and you have to fill these criteria, but how you do this is up to you" Dan Houser

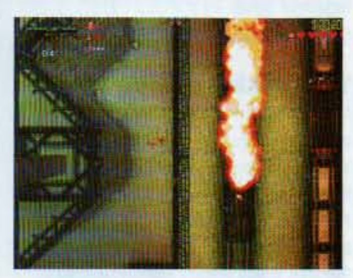
underestimated just how much the 'respect' would change the game – it's turned out to be integral to everything."

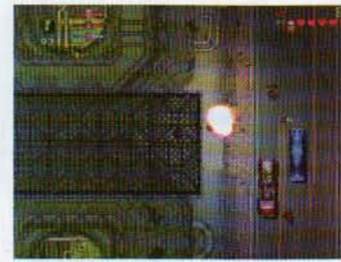
Facing a mix of opposing factions with whom you may work alongside or against, your relationship with NPCs is crucial: run a mission for one gang and you may well slip out of favour with another; a 'barometer' continually tracks your standing. "In the original you were driving around allegedly working for all these gangs," says MacDonald, "but in actual fact, none of them existed – the level designers just created characters at strategic points to reinforce what the mission briefings were telling the player. This time, the fact that the gangs actually exist before you even take on a mission acts an extra layer of depth to the game."

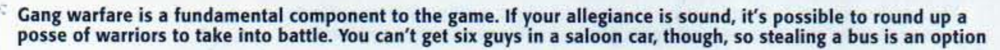
Extra depth is everywhere, in fact. "In order to make the city more interactive," illustrates MacDonald, "the AI controlling the vehicles and pedestrians had to really stand out – while you're doing nothing more than walking around the city. Instead of just the ubiquitous 'dummy' pedestrians that were in the first one, *GTA2* has proper characters – they have a set point they're trying to reach, and whether they do it by walking, driving, taxi, bus or train is down to them. There are muggers who just pick people at random, run up and wallop them; psychos who pull out machine guns and cause all sorts of chaos – potentially attracting the attentions of gangs or police at precisely the wrong times."











Gang warfare is a fundamental component to the game. If your allegiance is sound, it's possible to round up a posse of warriors to take into battle. You can't get six guys in a saloon car, though, so stealing a bus is an option

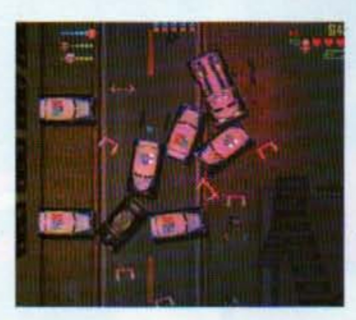


The PlayStation conversion (which Rockstar has not yet released shots of) is being coded at Gremlin, with assistance from DMA. Big things are promised

According to MacDonald, you won't see so many illogically messy traffic scenes either: "Vehicles can now 'recover' properly from crashes – reversing and doing three-point-turns in order to get back on the road. And they'll move out of the way of emergency vehicles, overtake slower cars – all the stuff that everyone *thought* was in the original but wasn't, and tons more."

City slicker

It turns out that the 'living, breathing city' tag afforded the original's game world was something of a rod for DMA's back. The design team took it as a compliment, but felt it inaccurate. The sequel's city should match such lofty claims more closely. "You can do virtually anything you'd want to do," says Sam Houser. "You can steal a taxi and earn money driving people across town; you can blow up radio stations and listen to the music die over the air; you could get mugged by a passing criminal, get carjacked yourself, watch someone else get carjacked, creep up behind people and mug them, play one gang off against another and watch them attack each other, steal buses and pick up passengers, drive recklessly and watch them run out of the bus..."



Almost 60 vehicles can be onscreen simultaneously. If they're blue-and-white, it's especially bad news...

Dan Houser: "There's no such thing as an average mission. They can vary from stealing a lorry cab, stealing the trailer, connecting the cab to the trailer, driving to a crane, leaving the lorry and finding a jeep, stealing the jeep and getting the crane to lift it onto the lorry, then driving the articulated truck at high speed across the town, making sure the jeep isn't damaged. Another example is a foot-based stealth attack on a gang hangout, culminating in a rooftop chase, which really shows off the AI of all the characters. Or a good old-fashioned shootout, only in this game you'll have four or more guys fighting with you... The real beauty of the game is that none of the missions are in any way predetermined – you get instructions and you have to fill these criteria, but exactly how you do this is always up to you, and doesn't take into account the police, other car-jackers, gangs – the whole world going on around you – so two people can complete the missions in completely different styles."

Effectively giving the player the key to the city should be a call to arms for moral crusaders, but it will not bother Rockstar and DMA. They are already preaching to the converted.

Scoring a sequel

If the first *GTA* didn't always look breathtaking, it at least sounded absolutely fantastic, hilariously mixing country-and-western ditties and dance tracks with abandon. **Colin Anderson**, DMA Design's king of all things audible, explains the approach to *GTA2*'s soundtrack: "By the time we're finished we'll have 30 tracks ready to go. We haven't decided whether we'll use them all or whether we'll trim it down to 20 tracks like last time, but there'll be some familiar bands, with new tracks from Stikki Fingerz, Stylus Exodus and Robert DeNegro, not to mention tracks from new artists such as Flytronix, Cow Tastes Good and Toys are Real.

"We're making the radio stations a much more integral part of the game this time. For a start there's more of them – 11 instead of the seven in *GTA*. On each map there will be two commercial stations playing chart music and then every gang area within the map will have its own station playing gang tunes. So, although you'll still get different music depending on what car you get in, it will also depend on whose patch you're on.

"We're not using CD audio this time because of the problems we had with it locking the game while the drive was searching for a new track, most noticeably when a player entered a vehicle. So this time we've gone for streaming Wav. files, which reduces the problem, and also means we can store more tracks.

"Another thing we'll be doing is realtime mixing of DJ links and advertisements. Unlike *GTA*, where the links between the songs were part of the CD tracks, this time they're going to be played back from CD simultaneously – at least on the PC version. This means that we can make the illusion of listening to a car radio a lot more convincing, since you won't always get the same link between the same songs and the songs won't always be in the same order."





The face icons at the top of the screen illustrate the state of your relationship with the three gangs on each level. Blow away one gang's sworn enemy and you'll immediately see a swing in their direction

Ferrari F355 Challenge

Italy's finest motor car manufacturer, Japan's leading driving game producer; one revolutionary coin-op. Edge talks to Yu Suzuki about *Ferrari F355 Challenge*, his most ambitious racer to date

During his commentary on the 1999 Barcelona Grand Prix, Murray Walker mentioned a theory that had been circulating around the Formula One pits of late: The week before in San Marino, David Coulthard was clearly having more difficulty getting through the backmarkers than his rival Michael Schumacher; although driving ability was no doubt a factor, some pundits put forward the notion that Ferrari drivers have a psychological advantage over their

opponents. Not only is the distinctive red paint easier for those tardy backmarkers to detect, it also has more menacing connotations than the sober Maclaren grey. Ferraris, therefore, literally scare others drivers out of the way.

around, Ferrari came back with a clear majority. It is a car everyone wants to drive, and who better to deliver the experience (or at least the next best thing) than Sega's driving game maestro, **Yu Suzuki**? Coin-op fans will remember that

"*Sega Rally* and *F355* are different types of game. *F355* is a simulator and it is the only one in its category, so competition is not possible. It's like French and Japanese cuisine – they cannot be compared" Yu Suzuki

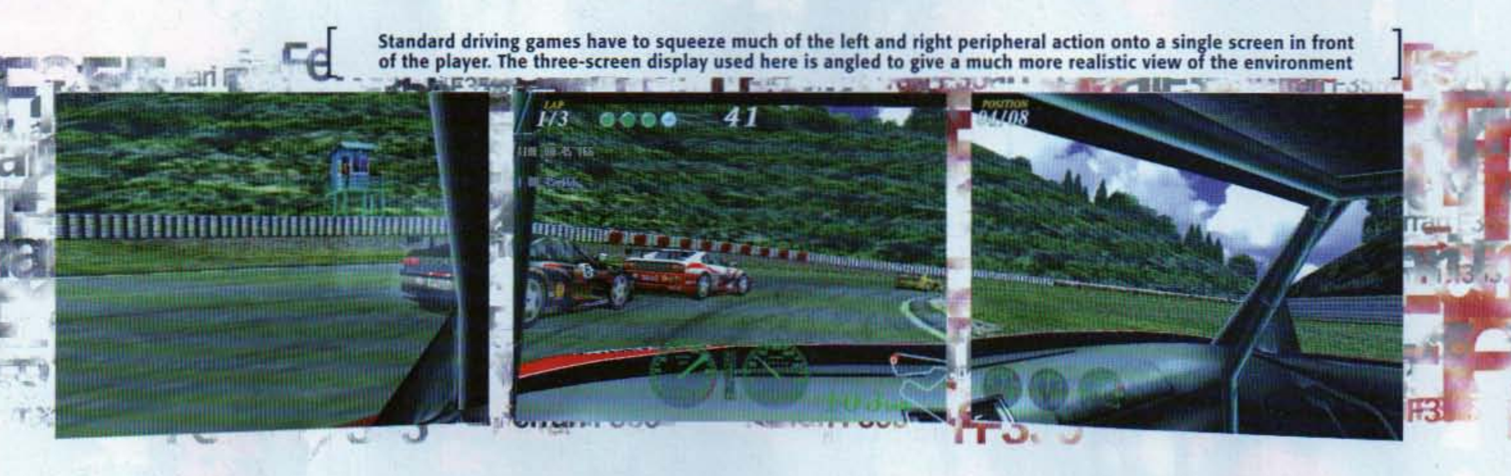
This is just a glimpse at the mystique Ferrari has built up over its 50 years in the performance car business, a mystique that has attracted some of F1's most famous drivers: Nikki Lauda, Alain Prost and the legendary Gilles Villeneuve. It's a mystique that has also given the brand an

he has already used a Ferrari-like vehicle in a previous game, *OutRun* (see p132), one of the most influential racing titles of all time. Now, after breaking away from the Italian stallion with *Virtua Racing*, *Hang-On* and *Power Drift*, he's back. "The idea is to make the impossible possible,"

***respects this objective"* – Goodyear Marenello Ferrari Challenge Sporting Regulations booklet, section 5.2.2**

It is fitting that the legend of gameplay should collide with the legend of motor racing, as both have a certain arrogance. Suzuki-san claims not to have a single favourite driving game, and looked only towards the 355 for inspiration during the development of this title – there has been no mention of other coin-op racers. Indeed, when asked about rival titles, he idly deflects the question. "*F355* does not have any rivals. In fact, there is no competition," he states, matter of factly. If requested to at least compare his game with others – say, *Sega Rally* – he is equally elusive. "They cannot compete together. *Sega Rally* and *F355* are different

[Standard driving games have to squeeze much of the left and right peripheral action onto a single screen in front of the player. The three-screen display used here is angled to give a much more realistic view of the environment]









In training mode, a red line shows novice players how to approach each corner. This is part of Suzuki-san's plan to make a user-friendly racer

unprecedented position in popular culture. Sonny Crockett's Ferrari Testarossa and Magnum PI's 328 GTS were potent symbols of '80s materialism, while the 355 itself has proven to be a capable film star, providing Sean Connery with a thrilling getaway vehicle in 'The Rock' and James Bond's Aston Martin D35 with a worthy racing opponent in 'GoldenEye'.

It's not surprising, then, that when Sega performed market research into which sportscar manufacturer they should base their next racing coin-op

commented president **Shoichiro Irimajiri** during the presentation of *F355* at Sega's recent Private Show. Two and a half years in the making, *F355 Challenge* is perhaps as close as the company can get.

"Both the Ferrari Owners' Club and the Championship promoters are anxious that the cars which race in the Championship do credit to the marque Ferrari. All cars that take part in the series shall be turned out in a manner which

types of game. *F355* is a simulator and I think it is the only one in its category, so competition is not possible. It's like French and Japanese cuisine – they cannot be compared, but both of them are good."

With its amazingly realistic circuit visuals and detailed car models, *F355 Challenge* is a Michelin three-star meal in the making. There are five circuits to race over (Motegi, Monza, Sugo, Suzuka and Long Beach), all of which are painstakingly modelled to replicate the real things and are filled with collateral detail. Even the

[There are five circuits in *F355 Challenge*, based with intricate authenticity on real tracks: Monza (pictured below) is in Italy, Long Beach is the US Indycar/NASCAR venue, while Motegi, Sugo and Suzuka are all Japanese circuits]



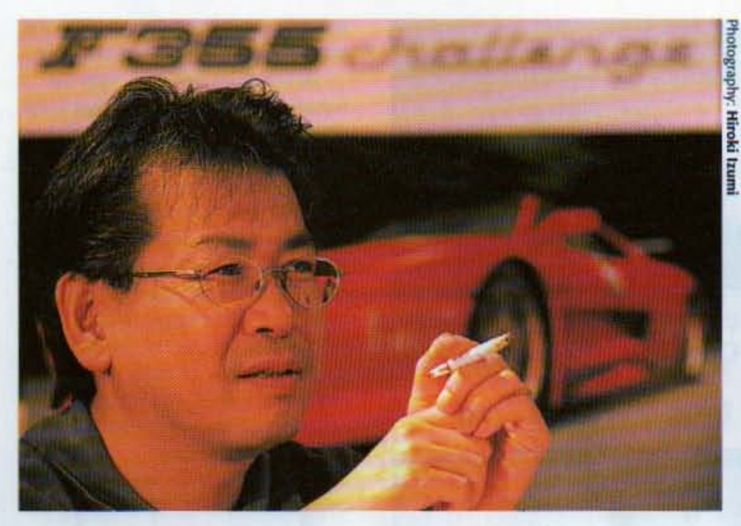




spectators are 3D polygonal figures rather than banks of bitmaps. As for the cars, the artists have applied incredibly sharp and detailed textures to each chassis, capturing the full aerodynamic beauty of the inspiration model. Predictably, the few short rolling demos leaked out of Sega HQ also show a silky smooth 3D engine. This is coin-op racing for the 21st Century – those with any lingering doubts need only check out that cabinet...

***"The body of the car must conform to the original in all respects"* 5.6.3**

The most striking element of *F355 Challenge* – to those approaching it in an arcade for the first time, at least – is its beautiful physical design. Like Sega's *Jurassic Park: Lost World* cabinet, this is an isolated custom unit (no link-up is planned as yet) which literally immerses you in the experience. An ergonomic seat, *Scud Race*-style, provides a comfortable racing position, speakers located at each side of the player's head resonate with engine rumble and, in front of you, three screens (powered by as many Naomi units) give an expansive and believable view.



Photography: Hiroki Izumi

Yu Suzuki pictured in front of the F355 itself. He owns his own Ferrari, of course

The 'Assist Functions Panel' is a row of icons which correspond to various driving aids. In Novice mode you can use stability control, traction control, ABS and intelligent brake system. Intermediate players get the first three only







On this note, Suzuki-san is keen to confirm that the triple monitor setup is not a publicity gimmick – it's a step towards replicating true spatial awareness. Until now, driving games using a single screen have had to pack everything that goes on around and in front of the player's car into a 24mm, sometimes 20mm, aperture view of the world. In other words, things that drivers would usually perceive to be all around them are crammed into a little square screen directly in front, so the spatial distortion is significant. To get as close as possible to human vision without a 'fish-eye' effect, you need a 50mm aperture. This is what Suzuki-san is aiming at, hence *F355*'s three screens, angled slightly around the player, giving a more realistic impression of the environment. Not only will this add to the visual

"With regular racing games, when rapid changes occur, the player's responses have to be very fast. Sometimes when changes occur too rapidly, the player cannot follow"

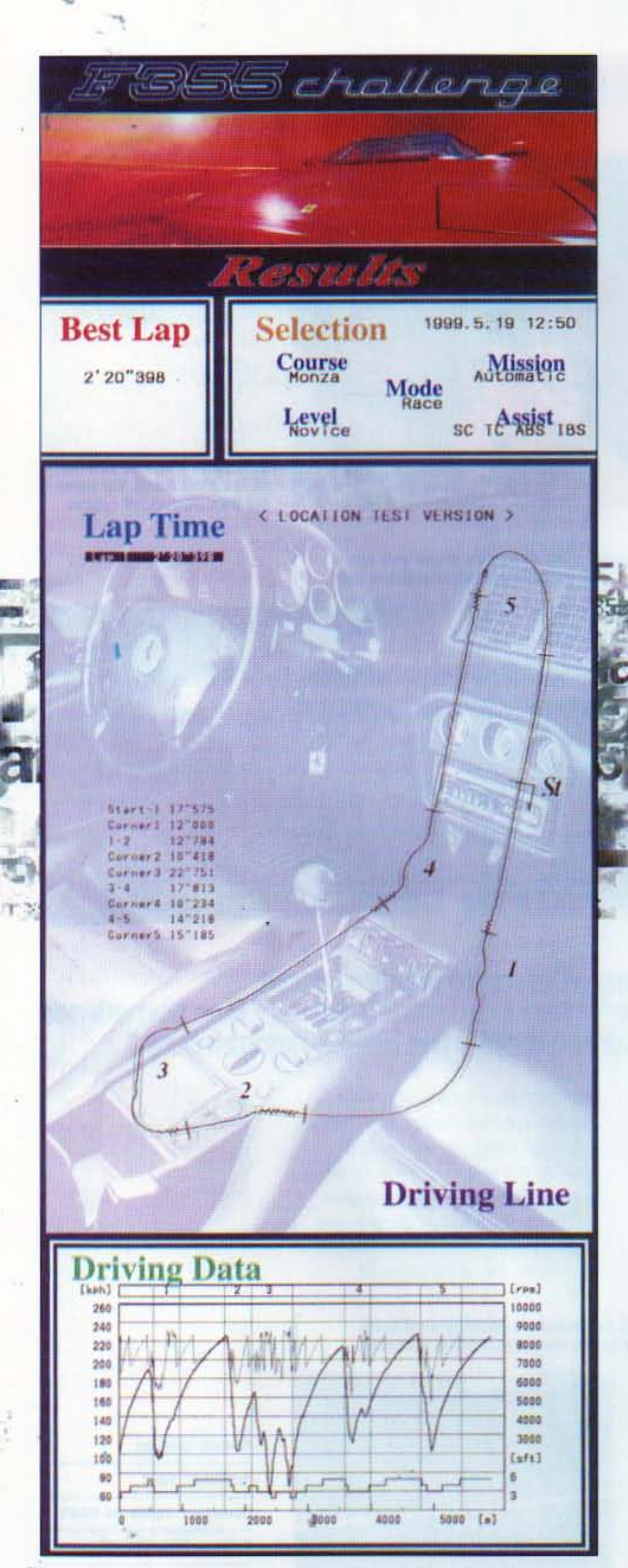
The ingame F355 is modelled on its real-life inspiration with amazing detail. Suzuki-san's development team also spoke to professional drivers and Ferrari engineers to ensure that the car performs as well as it looks







Format: **Coin-op**
Publisher: **Sega**
Developer: **Software R&D2**
Release: **TBA (Japan)**
Origin: **Japan**



When the game ends, players are given a detailed printout of their performance covering fastest lap time, driving line and RPM and KPH levels. Competitors will be able to compare data

authenticity of the game, it also brings the experience in to line with real-life driving.

As Suzuki-san points out, "With the human eye, objects start a long way in the distance and become progressively larger. By using a wide lens (ie, a singlescreen 24mm display), objects tend to suddenly appear in front of the player. With regular racing games, when rapid changes occur, the player's responses have to be very fast. He has to brake, accelerate, etc. Sometimes when changes occur too rapidly, the player cannot follow. In *F355* we wanted to give the player time to react properly to rapid changes. We could not accept the distortion which results from the usual wide lens view."

The multiple screen setup is not the only innovation, though. *F355* also

experience of driving a 355 is simulated with an unerring eye for detail. As purists would expect, the game has been developed in close conjunction with Ferrari, whose engineers have thoroughly tested the game for authenticity. Furthermore, Suzuki-san and co visited the company's Italian HQ to gather all the relevant car data, so what you get onscreen is Ferrari through and through, down to the most intricate specifications.

Given the in-depth understanding of motor racing evident in *F355*, you would think the entire dev team had worked on driving games before, but this is not the case. Only a few members came over from *Daytona*; several more are from *Virtua Fighter 3* – not the most natural of moves.

"My main problem in developing this

F355 Challenge: the real thing

The F355 challenge is an amateur championship open to owners of road-going F355s with certain modifications. Several countries run their own versions of the 14-race event – in Britain, the Goodyear Maranello Ferrari Challenge is organised by the Ferrari Owners' Club in accordance with the RAC Motor Sports Association.

provides players with a 'race analysis' printout at the end of their game, displaying information on their line of travel, times, engine RPM, speed and gear changes. Not only will this enable drivers to improve their specific weaknesses, but it also gives them a chance to compare data with other players.

game was that the team did not have a lot of knowledge about cars," jokes Suzuki-san. "They couldn't understand what I wanted to create because of their lack of driving experience, so I took them to a real circuit. I made them speak to professional drivers. I rented a Ferrari and put them in it. Those team members who didn't have a

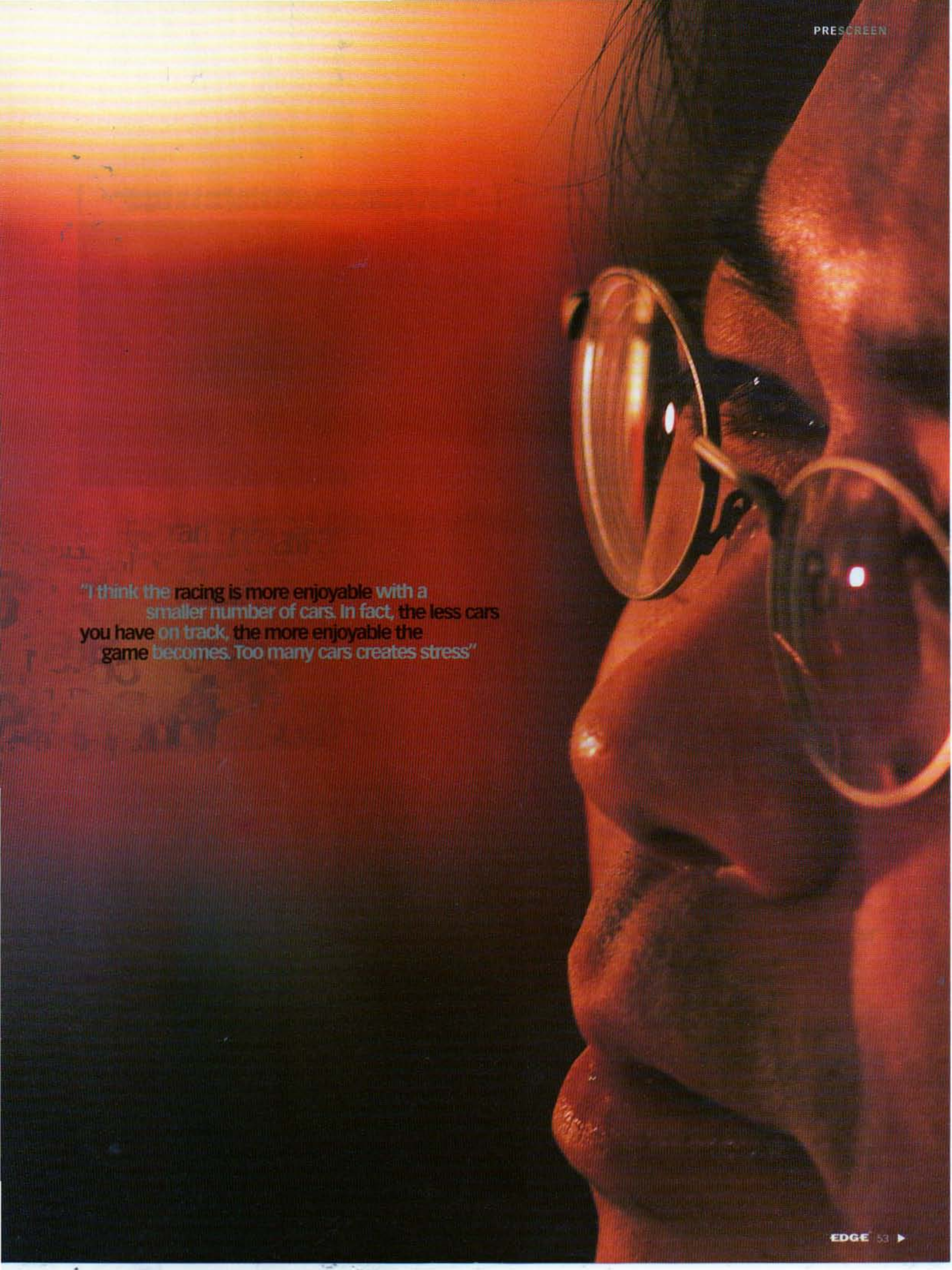
"A game has to finish within three minutes. There are no limits for a consumer game, but you cannot use a special cabinet. For me, the best thing would be a special cabinet along with unlimited game time. Now, that would be interesting"

***"The Championship is for ROAD-GOING AND F355 CHALLENGE Ferraris which have been manufactured by the Ferrari Factory in a series of more than 100 cars of that type... No pseudo 'Ferraris' will be accepted"* 5.2.1**

Not only is the actual experience of racing captured so scientifically, but the specific

licence, we made them pass it. People who didn't have cars, we made them buy one [laughs]. Even when they understood how the game worked, they couldn't understand the physical feeling." Considering the structure of the game, this crash-course in Ferrari driving is fitting.

Given the high level of authenticity, *F355* could easily have become a



"I think the racing is more enjoyable with a smaller number of cars. In fact, the less cars you have on track, the more enjoyable the game becomes. Too many cars creates stress"

playground for experienced coin-op drivers only, and yet it isn't. One of the most interesting aspects of the game is its concentration, not so much on competition with other cars, but on encouraging players to optimise their own driving instead.

With this in mind, the action is carefully graded by three skill levels – novice, intermediate and simulator – requiring a progressively wider base of skills from the participant. At novice level, for example, the gear shift is automatic; in intermediate players use a simple paddle shift; and in simulator mode they get a six-gear setup and the full three pedals. Similarly, opponent AI is graded depending on which skill level the player goes for. The experience slowly

Yu Suzuki: "*F355* does not have a rival. In fact, there is no competition... *F355* is a simulator, and I think it is the only one in its category"



There are only eight cars in each race, although the hardware could have handled more. Suzuki-san feels this leads to better gameplay balance and a more enjoyable experience, where the anxieties of racing are reduced



builds from arcade simplicity to simulation completeness – it's your choice where you jump in.

Furthermore, Suzuki-san has also implemented a new driving aid he calls the 'Assist Functions Panel'. In novice mode this consists of four functions: stability control (cornering adjustment), traction control, anti-lock braking and intelligent braking (brakes automatically before a turn). The functions are represented by four icons which light up when in use, so the player can gradually learn when to utilise specific braking tactics. As with the gear system, things get tougher as you go up through the skill levels: intermediate players only get SC, TC and ABS, while simulation players get no help at all.

Within these exhaustive modes are a further three options: training, driving and race. In the first, players are taught how to take corners (a red line on the circuits shows which trajectory to follow), how to brake and how to use the gears correctly. 'Driving' allows you to simply take the car out for a spin, while the race mode naturally provides a series of driving competitions. It's an unusually generous

"My main problem was that **the team did not have a lot of knowledge** about cars, **so I took them to a real circuit.** I made them speak to professional designers. **I rented a Ferrari** and put them in it"

Despite the visual complexity of the game, not to mention its use of three screens (each powered by a separate Naomi unit) to simulate a more realistic driving experience, Suzuki-san believes that a Dreamcast conversion is possible





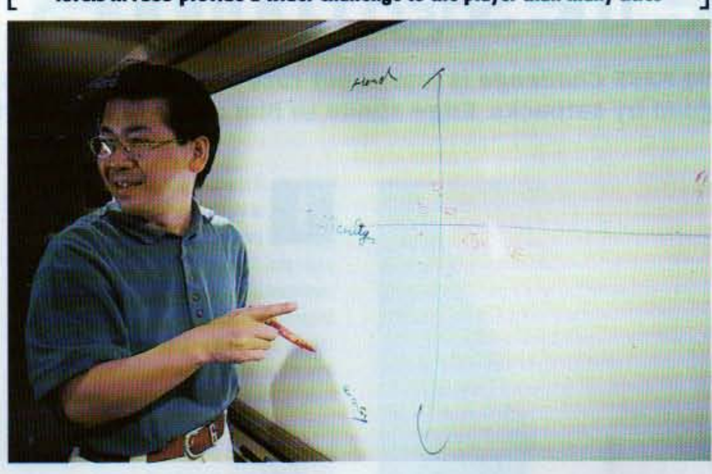


range of options for a coin-op, yet the usual restraints apply – something Suzuki-san feels hindered by. "For arcade games, playing time cannot be too long. A game has to finish within three minutes. There are no limits for a consumer game, but you cannot use a special cabinet. For me, the best thing would be a special cabinet along with unlimited play time [smiles]. Now, that would be interesting."

***"The club's objective [is] affording members the opportunity of driving their road cars in circuit competition..."* 1.3.2.3**

Suzuki-san claims that his aim with *F355* was to create "a simple game with a certain depth." Although the racing is realistic, there is evidence that he is just as concerned with capturing the experience of driving an iconic motor vehicle. For example, **Edge** asked him why there are only eight cars in each race when there were 40 in *Daytona*. Were there any hardware limitations? "No, we can display more cars without a problem," he smiles, "but I think the racing is more enjoyable with a smaller number of cars. In fact, the less cars you have on track, the more enjoyable the game becomes. Too many cars creates stress. To me, the driving mode is the most enjoyable."

Suzuki-san resorts to the whiteboard to illustrate how the three difficulty levels in *F355* provide a wider challenge to the player than many titles



The increased immersion provided by *F355*'s three-screen setup allows players to perceive and react to dangers, like cars closing in on the flank, more naturally. The experience therefore demands true driving skills



"In *F355* we wanted to give the player time to react properly to rapid changes. We could not accept the distortion which results from the usual wide lens view"

The temptation for lesser designers would have been to throw in as many cars as possible in order to show off the hardware, but it's clear that Suzuki-san loves these cars – he knows how enjoyable they are to drive and he wants to retain a balance between competition and sheer pleasure. However, this design isn't perfect. When asked about his choice of background music for *F355 Challenge*, he beams. "We use heavy metal music. When I drive my Ferrari I find it is the music that best fits the car. Van Halen fits well in Ferrari cars." Suddenly those two massive speakers don't seem like such a good idea...

The team visited Italy to pick up data on the *F355*, while sound sampling of the car was performed in Japan. Ferrari's own engineers, who tested the game themselves, were allegedly impressed with the authenticity of the experience

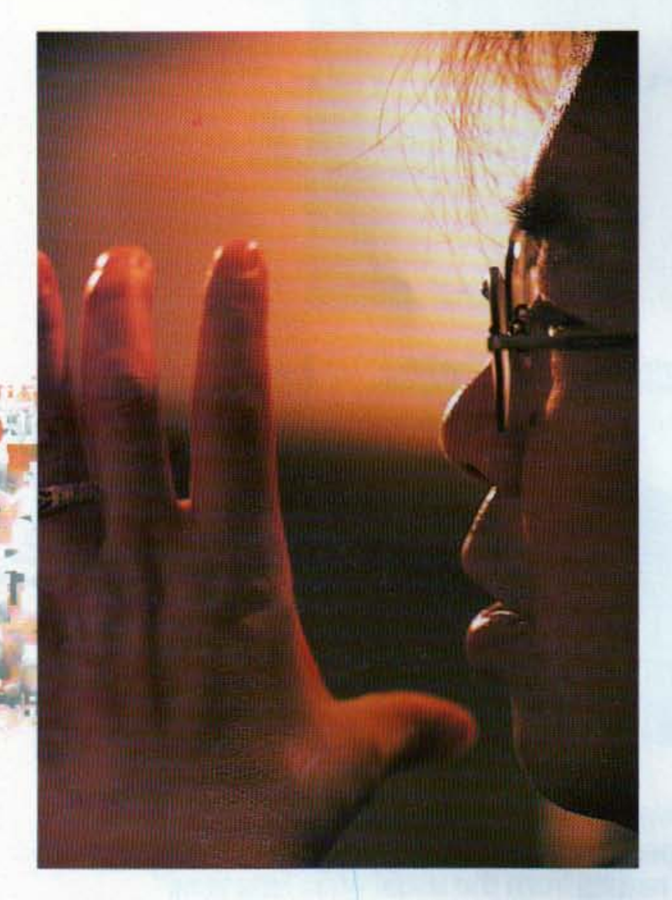






Shenmue: the saga continues

While *F355 Challenge* is just about race-ready, Yu Suzuki's parallel project has been plagued by setbacks. Edge spoke to him about a game on the grandest of scales



"In terms of making it more popular across the world, the characters will speak in different languages, just like in a real movie"

If it is possible for a game to be a victim of its own ambition, perhaps *Shenmue* could be an example. From the word go, the game was intended to emulate the real world to a stupefyingly extravagant degree. Such is the game's size, in fact, that Sega has elected to show it in chunks – most recently at E3, where visitors were less than enraptured with it (many were simply baffled by one particular segment, which simulated a game of pub darts).

Suzuki-san is not surprised that gamers have had difficulty getting their heads around his pet project, the ideas for which came into being over five years ago. "It is difficult to explain what type of game *Shenmue* is," he says. "The game is huge. *F355* is much more simple to understand. [Pauses in thought] In a nutshell, *Shenmue* is a cinematic adventure game set in China. The game themes – love, courage, friendship – are universal; they're standards across the world."

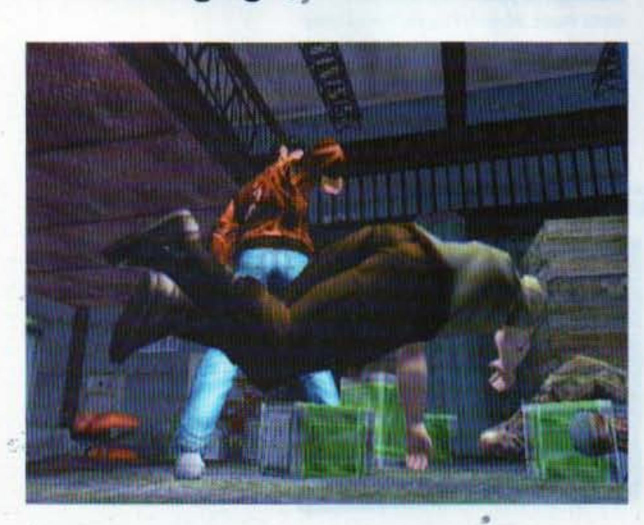
Aware that a game of this scale (development costs to date have famously exceeded $20m) must be universally appealing in order to turn a profit, Suzuki-san's team have attempted to make the game easily accessible – something that has frustrated hardcore gamers who've sampled its *Dragon's Lair*-style sections. "*Virtua Fighter* was difficult," says Suzuki-san, "so we simplified combat for *Shenmue* – battles will be simple and the interface is user-friendly. In terms of making it more popular across the world, the game's characters will speak in different languages, just like in a real movie. For example, Ryo, the main character will say 'Bonjour' or 'Bonsoir'."

With the first of two episodes due in Japan on October 28, Suzuki-san's team still has work to do – but there are enough staff to pitch in. "I can't say exactly, but the team is really big, much bigger than Sonic Team," he laughs. "The credits at the end of the game take more than ten minutes to roll!"





Scripted sequences drive the story along. Here, pressing 'A' in time evades the obstacle

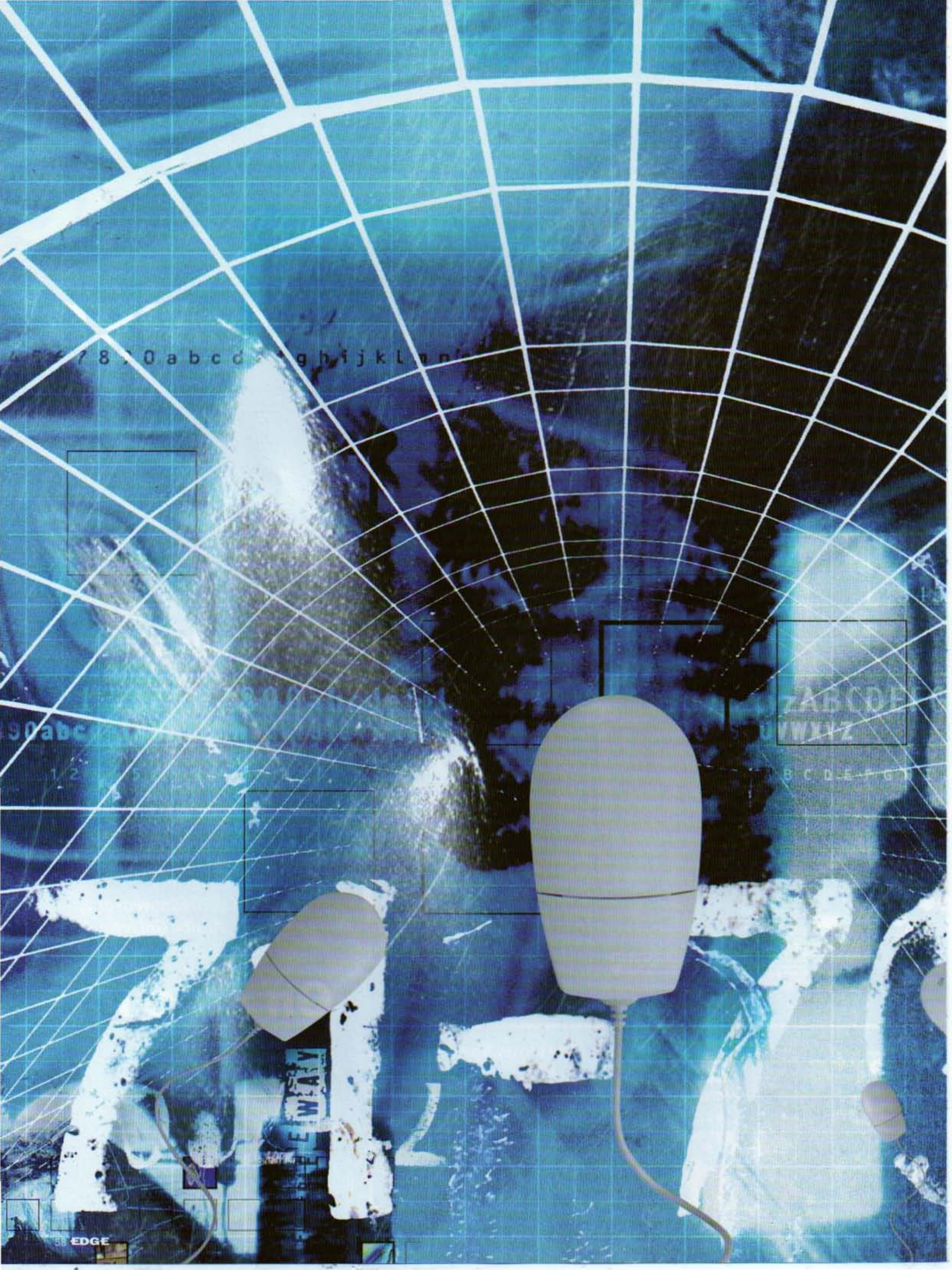








The game's ambition knows few bounds, even going so far as to include a virtual version of the Tokyo *Shenmue* Jungle exhibition (right)





g@me on

As PC online gaming finally begins to wriggle out of its hardcore niche and Sega prepares to launch the first Net-ready console in the west, **Edge** looks at the current state of play and talks to key proponents of the future of the next generation online

As with traditional videogames, the relative youth of online gaming is revealed by the scarcity of terms with which it can be introduced or described. Beyond 'online gaming' and the unspecific 'multiplayer', there are precious few words and phrases that offer a comfortable billing. Compare this with the wealth of language that can be applied to television – a significant, yet barely interactive medium – and its embryonic status is underlined.

It is telling that there is a more widely used and accepted pool of dialect for why playing over wires *doesn't* work. Or, at least, work properly. Ping, lag, latency, hang, crash, slowdown… all these and more represent a veritable glossary by contrast. And, while the newcomer might not grasp the intricacies of the words cribbed from technical circles, the underpinning for each soon becomes apparent. This, in turn, leads to a lot of verbiage to appraise any given online game: slow, inadequate, jerky – plus any number of expletives you care to imagine.

Yet, almost perversely, online play is incredibly, fantastically enjoyable. *Quake* and *Quake II*, once divorced from the stilted predictability of their singleplayer modes, become standard-bearing, thoroughly addictive classics. *Total Annihilation* and *C&C* become conduits between real opponents, rather than increasingly stately hosts of lonely battles against stubborn AI routines. Even the least accomplished of titles gains a degree of prestige when experienced over the Web by two or more players.

Online gaming is poised, at present, to make a genuine, generational leap. With

heavyweight support from Sega's Dreamcast and, inevitably, new consoles from Sony and Nintendo, can it become as popular as the oneplayer games that preceded and evolve parallel to it? Only a fool or a Luddite would argue against its potential. The rise of the PC as a massmarket product promises further, possibly meteoric, growth. This is a crucial point in the life of networked entertainment.

The success of online gaming's commercial exponents to date is difficult to judge. There are a number of success stories. Wireplay, for example, launched at a point when – for the UK at least – offering an online gaming service was an act of preaching to the converted. Naturally, BT was in a tailor-made position to bankroll and service such a venture, but its early investment will, in the fullness of time, pay dividends. Other hosts have profited, too: from the strangely monikered, popular Barrysworld (a favoured haunt of the hardcore), to the predictable contribution of Redmond's most infamous sons, the Microsoft Gaming Zone.

Ultima Online demonstrates that an online-only game can succeed. Despite the teething troubles that so blighted its early days, it has become a huge financial success for EA and Origin. The most fascinating facet of its achievements thus far, from a marketing perspective, is its use of the subscriber-based payment system. Its sales at retail are hardly the stuff of legend. With a sell-through of over 300,000 copies in the US, it would seem a small-scale effort in a country where the biggest games have sold millions. But, as its fictional world of Britannia is hosted, tweaked and maintained by Origin, a ten-dollars-per-month premium is charged. With over 100,000 active subscribers – and its initial development costs met by its retail performance – its consistent revenues margin would delight any publisher. Although on a much smaller scale, 3DO Studios' Internet-based *Meridian 59* also maintains a healthy profit. Having sold a pitiful sum via standard channels – around 20,000, according to reliable estimates – 3DO now sells the title (and its updates) online.

It's certainly possible to make large amounts of money from an online title. Understandably, though, many publishers are loathe to commit to a game purposely designed to offer just that. It's a tale of evolution, not revolution. The industry needs companies that are prepared to commit time and money to making online gaming more than a reiteration of a oneplayer mode, or increasingly surreal interpretations of capture the flag. Despite the best efforts of PC developers, the online gaming arena arguably needs the creative muscle of Nintendo, Sega and Sony. And now, in part, it has it.

Co-op gaming

Speaking to a variety of developers, **Edge** has been heartened to discover that many acknowledge the importance of the consoles in the future of multiplayer gaming. It would be premature, however, to make the assumption that Dreamcast, NGPS or Project Dolphin will bring immediate, radical changes. Indeed, while the consoles will have to offer ease of use and genuine plug-and-play functionality, they will also, by nature, struggle to replicate important aspects of their PC counterparts.

What of 'community'? Online gaming sites and even *Half-Life* games joined at random over the Net are enriched by the fact that players can communicate. Text-based chat may be clumsy, but it's still the accepted tongue of the Internet. How can a console, without keyboard, profess to replicate and support that? In short, as visitors of high-score tables on console games worldwide will attest, it can't. Introduce a keyboard peripheral, however, and that in itself introduces a number of awkward problems, as Sega will no doubt discover when the Dreamcast keyboard goes on sale in September (see News). Should it be marketed – thus introducing a dangerous element of 'multimedia' to a bright young console – or left on shelves to effectively sell itself to the hardcore? Do you highlight the chat elements it introduces to online gaming, or simply stick to the fact that it makes Web browsing easier? Until technology exists to allow voice exchanges to be supported, console manufacturers will have to consider this question long and hard.

Co-op gaming is perhaps the most exciting area of online games at present.



Chippings from the rumour mill: word has it that *QIII: Arena* was launched not just to test id's code, but as a spoiler for *Half-Life*'s huge online success





***Meridian 59* (left) performed poorly at retail, but is worth millions to 3DO; *Baldur's Gate* (right) is a oneplayer game with a strong co-op element**

While the deathmatch or head-to-head confrontation will always remain compelling, the teamplay model encourages communication married with fast-paced, strategy-tinged action. It's hard to imagine how, without a keyboard, console gamers could partake in this style of play without atmosphere-destroying trawls through menus of predefined text messages. Just how Sega, for example, will address this problem will deserve close scrutiny.

An interesting side effect of online games with a cooperative slant is that, in being true to that bias, they change the way people play games. A oneplayer title, by its very nature, will offer a player one or a number of challenges. You participate and, ultimately, you aim to 'win'. However, games like *Team Fortress Classic* or *Quake II*'s Capture the Flag blur the significance of this intrinsic piece of entertainment software design. While some will play for personal glory, coveting and clamouring for frags, others find the teamwork mechanic more absorbing.

Of course, reciprocal play is not an Internet-sired innovation. Both arcade, console and computer games have long offered such a slant. Invariably, though, such titles – from *Double Dragon* to, say, *ISS '98* – allow a simple pairing of players. A game of Valve's *TFC* with 16 individuals per team is a similarly enriching experience, albeit writ very, very large. Some matches are fractious and disorganised, with relative amateurs and the deathmatch-fixated fleeting across maps like mayflies. Others, by contrast, can be populated by clan members and experienced FPS gamers. Often communicating in time-saving acronyms, the standard of organisation and skills demonstrated by some players owes more to professional sportsmanship than it does to mere recreation.

Understandably, many take online gaming very seriously indeed. **Edge** readers, of course, require little or no introduction to the existence of clans: groups of gamers who play, and even train, in the art of cooperative play. Football played well has, rather subjectively, been likened in the past to ballet – an insult to machismo that, nonetheless, is a reasonable comparison. A similar platitude could be levelled at online teamplay. In CTF bouts (or any one of its growing number of variants), the discipline of each clan can be truly remarkable. Watching a player diligently guard their post, even when the action is centred elsewhere, is a revealing insight into a long-concealed aspect of the gamer's psyche. Moreover, successful or particularly outstanding play is rewarded not just by an increment of score, but also by abbreviated (and often, in haste, misspelt) congratulatory messages. And, oddly, that can mean more than many end-of-level or even end-of-game FMV sequences you may recollect.

There's a genuine sense of community in many online gaming arenas. Perhaps this is a legacy of Internet gaming's small-scale, enthusiast-oriented roots, or a confirmation that the humanist urge survives the rigours of relatively anonymous communication. You only have to examine the success of Internet chat engines to see how evidently people enjoy social interchange where they can, in effect, be anyone they like. With the absence of those two most critical of senses, sight and hearing, even the most shrunken of violets can be courted in a chat lounge or online game.

New worlds

Beyond action games, and even the arcade-tinged play of *Total Annihilation* or *Age of Empires*, lies a genuine online world. Known as Britannia, and home to Richard Garriott's alter ego, Lord British, the sheer scale of the land is breathtaking. Populated with towns, dungeons and, of course, people, its play mechanics afford gamers a bewildering number of choices.

Ultima Online is less a game and more a way of life to its current 100,000-plus subscribers. Being a sprawling, persistent world, every action has a consequence. From the flourishing micro-economies linked to various trades, to communities and guilds, players can experiment in any aspect of the world. If they wish to take the traditional RPG route of battling through dungeons or playing the merchant, they can. If they want to become fishermen, or lumberjacks, that too is possible.

Exploring *Ultima Online*'s fictional world – populated, as it is, by real people and necessary NPCs – it's fascinating to hear the tales of players from across the globe. Although its Europa server – launched officially on June 25 – was far from at capacity during **Edge**'s visits, it nonetheless contained a large number of real participants.



***Armada* will be one of the first online titles for the Dreamcast**

The most initially striking aspect of *Ultima Online* is just how unforgiving it is for the newcomer. Having chosen a trade – and there are many – you begin with a mere 100GP (the coin of the realm) and a few pieces of equipment. The stats of your online persona are woefully inadequate at this point. Origin, in fact, strongly recommend that new players remain and train within a town (and under the protection of its guards) until they are capable of surviving the considerable demands of the wilderness beyond. There is only one real way to raise the necessary statistics to a respectable level – you have to work.

Speak to *UO* players, and they may boast of how much they have earned within an hour's worth of play. A relatively new player with lumberjacking and carpentry skills, for example, may talk of making 200GP within 60 minutes. That, in real terms, will buy that individual a simple piece of armour, some elementary training or a better hatchet. Thereafter, it's back to the woods for another hour of seemingly arduous chopping. Double-click on the axe. Double-click on the tree. Double-click on the axe... and so on, and so forth. As this happens, the strength and lumberjacking skills of the player in question crawl upwards at a painfully slow speed.

It takes weeks, literally, to establish a character of even reasonable skill. **Edge** spoke to people who related tales of setting ingame macros to perform tasks – like using a training dummy, or playing a musical instrument – and watching a video while they are implemented. Others spoke of maintaining two or three characters within a game, where one is a favourite, and the other two are skilled in money-making trades. These are used to finance a 'main' character.

There are people who play *Ultima Online* for eight hours a day. They sleep for eight hours, they work for eight hours, and when they get home, they enter their online life. *UO*, despite flaws and shortcomings, transcends categorisation as a mere 'game'. There's far more to it than that. The zenith of the posthumanist dream is where a human casts aside its frail form and achieves immortality by uploading itself into cyberspace. You may or may not subscribe to such lofty, sci-fi tinged philosophy, but there's no arguing that, in a sense, people are already doing just that. Online gaming does not offer the tactile pleasures that the science-fiction interpretation of 'virtual reality' tantalisingly offers, with headsets, gloves and special reactive suits. Instead, and even in its oft-clumsy premillennium form, it merely captures the mind.

It's a start.



Unlike *Ultima*, *EverQuest* does not offer a persistent, 'saved' world

BT Wireplay

BT-owned, Wireplay's gaming service is currently the UK market leader in online gaming. Marketing manager **Oscar Clark** maintains that lead by encouraging a genuine community feel



Edge: Rumour has it that you're actually a genuine fan of online gaming...

OC: Where on earth did you get that idea from? [Laughs] Yes, I am. What I like about online gaming – and I think a lot of people don't understand this – is that online games are something you can do then and there. You can go up to the PC and click a button, and be in a community and be talking to people. It's not something you need to show a lot of commitment for, unless you want to get very good. If you do want to commit to it, you can as well. You can see by looking at the games that are very popular online – obviously there's *Quake*, because that's the first community that was built around a game, the effect that had on the longevity of the game is obvious for everyone to see – the fact that people too. There are so many servers that you can just go out and play on, that are set up by keen amateurs. So many people out there have set up their own *Quake* where you can go on and play their game. We need that kind of people as well as the professional people having a go.

Edge: Do you think that BT's per-second billing is damaging the growth of online gaming in the UK?

OC: It's a really difficult argument to deal with. Either you want a flat-rate connection or you want to pay for it as you go along. Some people prefer one model against the other. If you're a heavy user, obviously flat-rate is more appealing. The one thing it's easiest for me to say is that when you're trying to look at the way companies charge, you need to look not only at what would be best for you as an individual, but why the company charges the mechanism it does. It's not because the companies are greedy – they exist, after all, in a business environment that is encouraged to generate competition between companies.

Edge: What about the links with BT Internet in its various guises? That can't hurt the Wireplay service, can it?

OC: What's nice about BT Internet is that they've introduced an added-value service, giving 0800 access to the Internet over weekends. There are limitations to that, obviously; you have to be a subscriber, and you have two-hour slots which you can work within. What I want to stress strongly is that it isn't free calls, because some people have misunderstood the offer. So the model is there to give something back to online gamers. BT weren't the first



***Half-Life* is now played by more people on Wireplay than *Quake* and *Quake II* combined, according to Clark**

around four. The sort of connections I would expect personally with a normal modem would be something in the region of a 180-250 ping, something like that. That's assuming I'm on a server that's reasonable. Now with Wireplay, I'll tend to get 30 points below that. So I am getting something in the 120-180 mark on a particular game. But with ADSL, though, wow! These trials are going on right now. There are about 900 people currently using it.

Edge: Wireplay, for a market leader, has a surprisingly good sense of community. Can you tell us a little about that?

OC: What is easy to forget from a designer's or a developer's point of view, is that the player might want to interact with other players using more than the console, which is why chatrooms are proving so

"What is easy to forget, is that the **player might want to** interact with other players **using more than the console,** which is why chatrooms are **proving so popular.** It's a much more intuitive way **of dealing with things"**

are still playing *Quake*, and the numbers are still growing and the hours they spend on it are still rising, is fantastic.

I find the whole thing fascinating. I'm a classic tabletop roleplayer – I've designed games for that market and it's great – but there can be huge amounts of effort involved. You know, you can get all your friends together, down at a club or round somebody's house, but it's limited. Put it on the Web, though, and suddenly your social circle multiplies tenfold, hundredfold, thousandfold, depending on the environment you're going for.

Edge: How will the market grow within the next few years?

OC: The whole marketplace is going to change. We're one of the few examples of how people have sat down and thought about how they're going to make money out of this, how they're going to get a business, rather than something which is just a way of letting people test your game. It's only when people treat online gaming as a business that we're going to get an improvement in entertainment. The games industry has already shown that it can outstrip the film industry, but it's that attitude that's needed for online games, to do it, but at the end of the day, we have to be seen to be reasonable with other competing companies.

Edge: What about technology? Do we need better modems and connections before dial-up services can really offer the best online experiences?

OC: Cable is great, and so is ADSL. ADSL is on trial in Europe. When you're using your modem, you're taking your digital computer and converting the signal to analogue. It then goes down an analogue line to a digital exchange where it is reconverted to digital and transferred through. Now the bits and bobs that go behind the ADSL technology allow the connection between both to be digital. Therefore, you're getting a 2Mb pipe to you, and 128K back.

It's fantastic for Internet access. Of course, any connection speed you have is always limited by the outside world, so a superfast connection is all very well as long as everybody in the world also has one. What BT has done to get around that is to set up a server so that you can cache Web pages as they come through.

People [in the London ADSL test] are able to get on to Wireplay with ADSL. When we're in the labs, we were getting pings of

popular. It's a much more intuitive way of dealing with things.

Well, we originally thought that everybody used Wireplay for high performance. And yes, it is a prerequisite you have to have. So any time we're equal to anybody else we get crippled by criticism. And if we are worse, then we *really* hear about it!

We're trying to involve the community wherever we can. The message boards are the best way of doing that, because we just watch them. They're incredibly active. There's a handful of about 12 people who are on there almost the entirety of their lives. But these are people we know so well – they are always there giving us the stick we deserve and support when we are entitled to it. I'd rather be open-minded and honest, and listen to what people want.

As long as I'm responsible for the marketing at Wireplay, the community is going to be the most important thing. The grass roots is the thing that will make Wireplay what it can be, particularly now we've gone free. We've gone up something like 100 per cent a month in terms of usage. It's been fantastic.

Black and White

Much has been said of *Black and White*'s immaculate aesthetics and potentially groundbreaking play. But how important is the online element to Lionhead? Peter Molyneux responds



***Black and White*: lots of ping – from cash registers, that is**

Edge: How can a game as visually complex as *Black and White* work over the Internet?

PM: Everyone's saying that the speed of the Internet needs to be faster. And that is true, we could all do with a little more speed. But what we need to do is to disguise the shortcomings of the Net, so that they're not visible to the player. I won't go into the techniques, but the important thing is that people should not notice that everything's grinding to a halt on occasion. They should still be able to interact with the game, and should believe that they have the most wonderful ping times. That's difficult to do with firstperson shoot 'em ups, so people think, How the hell are you going to manage that in a game where you control potentially thousands of things? Well, the trick is to send the player's actions – not what is actually going on in the world all the time.

For online gaming to work, it has to be seamless. There should be no real difference between playing a oneplayer mode on your own, and playing across the Internet. If there is slowdown, if there are these massive lags, then anyone but a die-hard gamer is going to get pissed off. People have spent their money on the modem and the game. They don't want to know about slowdown and grinding halts. They just want to play a cool game. That's what we have to aspire to.

Edge: How do you feel about the reliance on patches? How will you avoid après-release fixes with *Black and White*?

PM: The answer is to have what is called 'closed beta tests'. The server should be going up in a couple of weeks, and we've got a very, very select group of testers – probably about 100 to start off with. We'll push it as hard as we can with that group, then start opening it up to a slightly larger audience. If we were just playing it here, over the network, we wouldn't be able to solve any of the online problems. A singleplayer mode in a game will have potentially thousands of hours' worth of testing. An online mode should have at least the same.

It's ridiculous that before a game is even in the shops, there can be patches to download. There's clearly something wrong with that. What a lot of publishers and developers do is that as soon as they get a version that they believe has no bugs in, they press the button at the disc manufacturers. One of the things the console manufacturers have done for a long, long time is to do thorough tests. Console games are many times more reliable than PC games. The PC publishers blame it on things like: 'Well, you've got this sound card here, and that video card...'

Edge: Are genuine 'upgrades' – like *Team Fortress Classic* – beneficial or, indeed, profitable?

PM: When you release an online game, there are thousands of people playing it, and there are obviously things that people will want to improve. It shouldn't be a duty. It's an incredible advantage to be able to say 'Look, there's a slight imbalance here, let's tweak it'. Or maybe: 'Here's another way you could play that bit. Let's make it and send it out'. But to what extent do you take that? If you're not making any revenue from it – if you're not charging people – then how diligent are you going to be in servicing your game? I think maybe at some point there could be some kind of micro payment system, similar to *Ultima Online*, that would enable you to continue developing something.

You know the Lionhead satellite scheme? We're actually setting up another, purely to service and produce new products for *Black and White*. They'll look at different things you can do with your creature, and new things they could add to the game. I hope that will go on for many years. Creating an online game is more than simply adding the option to do so. You need to encourage a culture, to build things around it. There isn't a game yet that uses the full potential of the Internet.

Edge: How will consoles with modems, like Dreamcast, change online gaming?

PM: Even the best examples of online gaming are still incredibly techy, overly complicated and filled with options. When you play a console game, you slap the CD in the drive and you're playing instantly. With an online game, it should be exactly the same. The quality of play should match that of the solo mode. Many people who play console games just won't have the patience to log on, type 'www.gamesbollocks.com' and install the necessary software.

In five years' time, when we get all the console games online, we'll look back on the games of today and they'll be as laughable as *Manic Miner* is now. It needs some bloody good designers to get the best out of it. Id has done a lot to make online gaming happen, I cite them as being the main proponents of it. But it needs to be taken further.

Edge: Are you interested in Web-based voice technology? How do you feel about the possibility of allowing players to choose an off-the-peg voice, or to create their own?

PM: The stuff I've seen so far doesn't change the voice significantly. If you've ever tried to use something like that – and I have, we've done tests here – you find that it's excruciatingly embarrassing to do. You do feel like you're speaking to a computer, and you feel like a bit of a twat. It's like using hands-free when you're on the phone, but a lot worse. It's also a problem that, with games, it could make things a whole lot more personal. With online software, you can flame people. Everyone flames people they don't like. You have 12-year-olds flaming 40-year-olds. If you're actually talking, though, and you say: 'You bastard, you're a complete idiot', and so forth, it's an awful lot more personal. You get the online equivalent of playground bullies – people who go online with the express intention of beating people up. There's a massive amount of design that we have to apply to it before it can work.

Edge: Should developers think twice before tacking a Net play option on to a game?

PM: When I was playing *Civilization*, I would have *killed* to play it, I would have paid *thousands* to play it on multiplayer. But then I got Civnet and tried to play it, and it was painful. The design of the game is like a board game – you end up sitting, tapping your fingers, waiting for someone to take their turn. So unless there's some way to shout at people and say, 'For God's sake, hurry up', it just won't work. There are some games that, no matter how much we want, or believe they should be, online, they actually don't work in that way.

Edge: Is online gaming profitable?

PM: With almost everybody in the industry, if you ask them, 'Is online making you money?' most people say no. There are people making money, they just don't want to wave a flag and say they're making a lot.

"Creating an online game is more than simply adding the option to do so. You need to encourage a culture, to build things around it. There isn't a game yet that uses the full potential of the Internet"



Storm Fortress Edge

Get online with Edge and win eight Saitek GM2 Action Pad and Mouse systems courtesy of Wireplay and Saitek

Thanks to modem online gaming technology, BT Wireplay is giving you the chance to prove what you have always suspected – that the **Edge** team really does spend its waking hours toiling on the magazine and not fragging.

On the evening of Wednesday July 28, in cooperation with Wireplay and Saitek, **Edge** is throwing open the doors of 'Fortress **Edge**', an evening of team-based online combat where teams of **Edge** readers can take part in a series of battles to the death in Valve Software's exceptional *Team Fortress Classic*.

In the game, each player assumes one of nine roles (or classes) including medic, soldier or engineer, and then joins up online with other team mates to match wits and skills against opposing teams. Each class has unique weapons, items, abilities and styles of play to utilise to best effect, so some experience of the game is advisable, though by no means necessary.

The winning team will then get the chance to take on a team comprising members of **Edge**'s editorial staff, after which they will each receive prizes of a slick Saitek GM2 Action Pad and Mouse system.

To take part in this 'Fortress **Edge**' competition, you will need a copy of *Half-Life* (fully updated with *Team Fortress Classic*, which is available either as a download via the Net from **www.valvesoftware.com** or from the cover CD of magazines such as **Edge** sister mag *PC Gamer*), an online PC, a window in your diary on July 28, and nerves of steel. Don't worry if you haven't got a ready-made team of eight friends to join up with, though, as players can sign up as individuals and will be assigned to teams by the organisers (groups of two or more players who want to play together will also be accommodated).

• *For further details, or to sign up to take part in what should be a memorable event, visit* ***www.wireplay.co.uk/edge/competition***

Dreamcast

As the console industry prepares to embrace online gaming, **Edge** catches up with Sega Europe CEO **Jean-François Cecillion**, a man poised to bring online gaming to the masses



Edge: How significant is the online aspect of Dreamcast?

JFC: Since I joined Sega – around eight months ago, now – I have spent a lot of time looking at the online element of Dreamcast. This is one of the elements of the console that I find most exciting – being able to provide gamers, and a wider audience, with this obvious attraction. We want to provide an easy, hassle-free gaming element.

You've noticed that we have this deal with British Telecom and ICL? Whatever happens in the future, the online element and the electronic element will be absolutely importantly, and it's something that we've always wanted to deliver, is online gaming. It's the next big thing. [Pauses] I don't think we're going to be rushing into it, though. With the first online game we will have to get the best message across. We can say: 'You can play against your friend in Birmingham'. But it has to be real, it has to work. You should be able to play with anyone, anywhere. If it's just a nice 'promise' and there are a lot of problems, people might not be happy. We need to improve the size and quality of our online library, and to improve the technical aspect of the online process. We need to do a lot of tests, and we need to make sure that everything works across Europe. The day we go out with an online game will be when we have everything right.

Edge: Will the speed of the modem be a problem? You're using a 33.6K modem to begin with, rather than a 56K unit...

JFC: It will be a 33.6K modem at the start, and then it will improve very quickly in time to, I guess, a 56K. There's no need to worry about it, though. To simply include the technology and not use it – well, that's not hard. But you have to ask yourself: what speed modem do we actually need at present? We are working with BT and ICL, these companies have the skill to combat any possibility of lag time. When there's a need for 56K, we'll use it. And, then, when faster speeds again are needed, we'll go for more and more. A 33.6K modem is a fine speed for the market at present.





Sega Rally 2 **(left) and** ***Virtua Fighter 3tb*** **(right) are hotly tipped to form part of Sega's online gaming strategy in the UK. But when? And how?**

the machine here, you're playing other people. That element is pretty fundamental. I really believe in the social gaming aspect of Dreamcast. It's something that hasn't been seen yet. The positioning of the machine will reflect that concept, of course.

Edge: Are you looking to port successful PC multiplayer games to Dreamcast?

JFC: The *Windows CE* software that Dreamcast supports makes porting PC games across very easy. So it's always a possibility. But we're looking at many possibilities.

Edge: Such as?

JFC: My advice to my colleagues at Sega Europe is to be very open-minded. Let's try not to alienate anyone because we can't do this, or we can't do that, and so on. The world isn't waiting, and it certainly doesn't wait for

"We need to improve the size and quality of our online library, and to improve the technical aspect of the online process. We need to do a lot of tests. The day we go out with an online game will be when we have everything right"

determinant in our strategies. At launch, we will be able to give free Internet access, we're bundling the modem with the machine, which was up in the air for a long time. I spent months and months looking at our margins and trying to ensure that we would not go over the price of £199. I didn't want £219, or anything like that – I was determined that £199 was the level we wanted to enter at. But to stay at that level while offering a free modem, free Internet access and free email – all that for less than £200? I think that's a very strong proposition.

Edge: Do you feel that you are competing with the iMac and PC for a slice of the Internet market?

JFC: Are we competing with the PC world? Will people opt for Dreamcast if they are only interested in the Internet? You can go into a shop and get a machine called Dreamcast for £200 and, well, it can offer you everything your PC can offer you. And if you are also interested in games, it can play very high-definition software that's better than those on the best PC in the market today.

We don't care if an owner has a PC and a Dreamcast, or a PlayStation and a Dreamcast, or even an N64 and a Dreamcast. It doesn't matter – you can have two or three TVs in a house today, and people have two cars. You have to look at what you can do specifically with Dreamcast. In the commercials that we're shooting at the moment, we're highlighting things like social gaming. You can have four players at a time on Dreamcast without connecting to the Net. There's also the free email and Web access. But, most

Edge: Isn't there a danger that an upgrade in the short term could alienate existing owners?

JFC: If we were saying, 'It's £200 for the Dreamcast but it's £20 extra for the modem, and another £10 for Internet access', your question might be valid. But the fact that we've bundled the modem and Net access for the same price means I'd dismiss the question. We want to improve the Dreamcast technology in time, and when we do that we will explain it – not justify it – to people. I want to focus on the needs and the technology of now. When the market shifts into other gears in one, two and three years' time, we will introduce enhancements with the appropriate marketing tools. What I'm trying to do here is to be open to opportunities.

Edge: Have you finalised which online-compatible games will be available before Christmas?

JFC: I can't tell you – that's a big surprise. We're looking at high adrenaline, high-return competitions where people don't know what will happen next – you're not playing against the waiters, if you see what I mean. We want to be open to everything that is happening. One very controversial thing we're looking at is electronic commerce. How do you build an e-commerce business on your core business without alienating your partners? I believe e-commerce is part of the future for Sega. Of course, there will be people in the industry that will not want us to do that. But it's my job to look at everything I can bring to the company, and it's my decision to say whether this is a good move for us. Maybe it isn't. But I'll make that statement when I'm totally sure.

Edge: What of ADSL? Is that a direction for Sega to consider?

JFC: For the moment I'm pioneering a couple of things – free Internet access, the modem, and so forth. But I'll be looking at ADSL. I'll be very interested to see how things develop between now and September. We know that something could happen in the next three months that could change everything. My target, for the moment, is September 23.

Edge: Will a keyboard peripheral be launched at the same time as the Dreamcast? And how much will it cost?

JFC: Yes. As for cost, we have two options, but it will be a good price.

Edge: £200 is a bullish price point for a console launch...

JFC: Yes. Saturn launched at £399, the Nintendo 64 at £349, and the PlayStation at £299. But with the Dreamcast, we offer Internet access and a modem! I'm very price-sensitive. I don't think it's a good idea to go into the market and hit people with a huge price. Once you've sold to the initial adopters, what do you do then? Put the price down to £150 and say, 'Oops, we got it wrong'? What do you say to the people who paid £300 or so? You have to be consistent in this respect.

Edge: There's a huge proliferation of free ISPs at the moment. The majority make the revenues not through advertising, but by receiving a portion of the per-minute charge levied by their partners at a telecom company. Is this how Sega is affording to bundle the modem and free Net access with Dreamcast?

JFC: What you're asking me here is to divulge a very commercial point of our deal with BT. I can't tell you. But what I *can* tell you is that BT are hugely, *hugely* excited with this. It's not so much a question of revenue, it's more a question of actions we can make from that, to maximise the revenue. Free Internet access? Big deal! Everybody does it. The trick is to make this one better than the others, or more attractive. This can be done with content, with the renewal of the content, and by the joint marketing and promotion actions that you take. You offer the consumer an exclusive package.

Edge: So if you have these strong links with BT, is it likely that it, through its Wireplay service, will handle the online gaming aspect of Dreamcast?

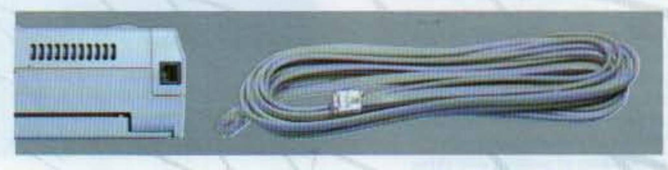
JFC: [Laughs] I will leave the answer to them... [Pauses] Yes.

Edge: How do you intend to appease the hardcore gamers?

JFC: Well, at first we will be selling the machine to the gamers. Whatever we do, we have to remember that our core business is gaming and that our core market is hardcore gamers. We are not going to release stupid amounts of games on day one, because if you do that, in six months' time you are dry. There will be 30 games by Christmas; there will be 50 games by spring; by next Christmas, there will be over 100 games. You build a library like this. Some of those games will offer online play. Some games will be online only.

Edge: Online-only games?

JFC: This is not for the launch, you understand. This is just part of my strategy in time. It's something for the short-term future, but certainly not for the launch.



This subtle, almost hidden socket is one of the most significant developments in console gaming. Online gaming is truly coming of age

Half-Life

It is hailed as one of the most progressive oneplayer games in recent years. But, with the addition of *Team Fortress*, *Half-Life* is also an online success. Valve's **Gabe Newell** explains why



Edge: *Half-Life* is a huge success as a oneplayer game, but has its online popularity surprised the Valve team at all? Did you envisage that the online gaming community would embrace it with such enthusiasm?
GN: We spent a lot of time after *Half-Life* shipped continuing to work on the multiplayer portion. We started out shipping additional maps and multiplayer models, and have continued with things like the MOD browser and the inclusion of *Team Fortress Classic*. There is so much to learn and to try in multiplayer gaming, and by doing this incremental work, we've not only helped fuel the *Half-Life* online community, but we have learned a ton that will get applied to *Team Fortress 2* and our future games.

The online community is very appreciative of the few companies who keep grinding away making improvements and releasing additional content. The big effort underway now for us is to work with the MOD authors like the A-Team and the guys doing the Russian Front, to get their MODs out and keep building the community.

Edge: When was it decided that *Team Fortress Classic* would be given away as a free download? And why?
GN: The two big reasons why we made it available as a free download were to help us validate the *Half-Life* developer tools and to give us more experience shipping multiplayer games. It was also an appealing way of saying thanks to all of the *Half-Life* supporters who had been so patient during the lengthy development cycle. I think we started to get pretty serious about developing it as a free expansion for *Half-Life* after we had shipped at Christmas. John Cook and Robin Walker didn't have any family to go and see during Christmas, as they're from Australia, so they had a bit of time on their hands and got a prototype together pretty quickly.

Edge: What do you think makes *Team Fortress Classic* so appealing?
GN: There are a bunch of different things that combine to make it a much more social experience than most types of multiplayer action.

Edge: Do you feel that *Half-Life* and *Team Fortress* are accessible for the casual gamer?
GN: At the Computer Game Developers Conference I got to meet with several other action game designers as part of a panel. They had been seeing about five per cent of their retail customers trying the online portions of their games. With *Half-Life* we were getting about 50 per cent, so things like the integrated server browser and the Quick Start option definitely seemed to be helping us reach out to a broader group of gamers.

I don't think we've even started to scratch the surface of the opportunities for improving the accessibility of games. For example, in *Team Fortress 2* we have a coaching class. The coach is basically a silver ball floating around a player controlled by a more experienced player. Only the person being coached can see and hear the coach. The idea for this grew out of watching lots of real gamers playing and seeing what would happen when you brought in new players. Invariably a more experienced player would wander over and start looking over the newbie's shoulder, pointing out aspects of the map, talking about the objectives and cheerleading them through some combat. After seeing this a couple of hundred times, we smacked ourselves on the head and said, 'Doh, of course! This should be part of the game'. It's fun for the experienced player, it helps obviate a lot of the frustration of new players, and it incorporates the social dimension that we think is key to the longevity and popularity multiplayer games will achieve.

Edge: *Half-Life* and Dreamcast – a match made in heaven? Do you think that *Half-Life* or *TF* could be a huge success for both Valve and Sega, given the online capabilities of its new console?
GN: We have had a lot of interest from the console manufacturers in *Half-Life*, and are working with them to figure out if and how it should end up running on their systems.

Edge: Further to the last question, the next generation of consoles are all set to offer Internet functionality. Will Valve be investigating the possibilities of working with these machines in the near future?
GN: We are super-interested in the new round of console machines coming out.

Edge: Do you feel that its prowess as an online game has helped *Half-Life*'s sales?
GN: It's always hard to deconstruct what exactly is driving sales. Given anecdotal comments from the retail channel, it definitely has helped keep interest going in the product, along with all of the awards and press. We are doing some new packaging in the US that features '*Team Fortress Classic*' more prominently – it will be interesting to see how that does.

Edge: In general, do you think that PC owners will now buy games on the strength of their online options alone?
GN: I think the industry will learn a lot from the releases of *Quake III: Arena*, *Unreal Tournament* and *Team Fortress 2*. We think *TF2*'s approach is the right recipe for a mainstream success, of course, but the relative successes of each will help point the industry in the right direction.

Edge: What technology advances do you feel the industry needs before online gaming can match the speed of LAN-based games?
GN: There's still a lot of work to do on the software side. Reducing perceived lag is still the most important design objective when comparing Internet versus LAN play, although fairly soon there will be game designs where the bandwidth also starts to be a problem. I've had ISDN, a cable modem, and ADSL installed on my home machine, so I can compare them, and once people have ADSL, you pretty much have a LAN-like experience. Some of the US PC companies, like Dell, have started to offer PCs preconfigured with ADSL modems and work with the telephone companies to provision the service. That's a big step forward until ADSL becomes widely prevalent and the hardware becomes commoditised to the extent modems are.

Probably as big, if not a bigger issue, though, is thinking through the real user issues of millions of people playing online games. There are a lot of user-interface issues and back-end service issues that need to get addressed. How do I find my friends? How do you schedule league matches? How do you see game statistics? That sort of thing.

Edge: Do you think that realtime voice communication during play is a possibility within the next year?
GN: It's definitely possible on the technical side. A big issue is making sure voice is integrated into your game design so that it doesn't just turn into an obscene party line.

Edge: How do you envisage the online gaming scene will grow?
GN: We're pretty sure that some sort of Internet entertainment company is going to start to affect traditional entertainment in the same way that Amazon.com has started to redefine retailing in the United States. That may sound almost insane, given the complete lack of such a presence now, but you can see with some of the leading-edge constituencies, like the *Team Fortress* community, how people are starting to migrate their entertainment time away from the traditional media and towards computer-based entertainment.

Edge: Many countries in Europe have a by-the-minute billing system for local, off-peak calls. What's your opinion on this?
GN: As a consumer who has flat-rate billing at a very low rate, it sounds sucko. I assume at some point that the companies that try to charge such high prices will eventually be forced to change because of competitive pressures, and the ones that resist that change the longest will probably go under. In terms of national competitiveness, it would be a good idea to encourage the rapid growth of consumer Internet usage, and that if the per-minute pricing is set at the national level, they might want to rethink that.

Of course, I am ridiculously biased, coming from a company that builds products where we'd like connect time to be free. I'd also like the city of Seattle to subsidise my capital costs, just like they do for the sports franchises, but that probably isn't going to happen.

"You can see with the leading-edge constituencies, like the *Team Fortress* community, how people are starting to migrate their entertainment time away from the traditional media and towards computer-based entertainment"



***Half-Life* is massive on the Net, rivalling its singleplayer success**



The deathmatch will always have its place in online gaming. Evolving permutations of the co-op experience, though, are far more exciting

Ultima Online

US-based Origin Software has enjoyed worldwide success with its *Ultima* series. Taking the dream online was the brainchild of founder **Richard Garriott**, and he hasn't looked back since



Edge: Do you feel that *Ultima Online* is particularly accessible to the newcomer?

RG: It's for the hardcore, and in my mind there are two major barriers to that. One is the physical process of installing and launching an online game, having an Internet Service Provider in the first place and launching your ISP at the time you start playing. The second part is how the game handles as this is a very different style of game. Most people come to an online game planning to win, they think, Okay, how am I going win this? And people have a huge misconception about what exactly they are going to do. They have to figure out that it is a virtual *world*, in which they can go and live and make their own profession and do whatever they want. The other problem is that you're being dropped into a world with lots of more experienced people. By its very nature, it can be a very intimidating process to both learn the game and learn the interface. Those aspects of it we can't solve, but maybe the changes we'll make with this game and, more importantly, with the sequels we're likely to make, will do a lot to address that.

Edge: Did you expect *Ultima Online* to be a success?

RG: We launched *Ultima Online* over a year ago in the US, which brought us very interesting success and difficulties for our company, in the sense that *Ultima Online* is now the first and only financially successful online game on the Internet. It's interesting that, while we were creating this game, we had much more modest expectations for its impact in the world, or as a game, or even to our company. And when we were building it, the most successful, purely online game before *Ultima* sold 10-25,000 copies, with a couple of thousand subscribers, and we thought it was a pretty good marker to shoot for. So we started planning *Ultima Online* and we actually built one server in Austen, Texas. We could only test the game internally ourselves with a few dozen people, and we were getting close to distribution. We thought, Wow, we need to get a few thousand people online to stretch-test the system. And we were gonna go and give some people CDs to test. But we didn't want to give free CDs to more people than would actually help us, so we charged people to become testers – and 50,000 people sent us money! Suddenly we were like, 'Uh-oh, we're really in trouble'. So we radically rethought the scale of our project. We built four servers spread out across the US, one on the east coast, one on the west coast, one in Austen and one near the Great Lakes area in the north. And *Ultima Online*, after launch, became the fastest-selling PC game in EA and Origin history.

Edge: *Ultima* has been a phenomenal success, then. But will 989 Studios' *EverQuest* begin to encroach on that?

RG: *Ultima Online* has already – in terms of financial revenues – become the number one best-selling PC game in Origin and EA history. We've sold 300-and-something-thousand copies already, only really based in the States. And we still have 125,000 subscribers and now run about 15 or so servers worldwide. We have 500 new subs every week to this game. Even so, with the launch of *EverQuest*, we anticipated some impact on our sales trends and things. But the good news is that the market is expanding. In time we'll be fighting over the same market, but it turns out we're not yet. Even though there are other medieval fantasy games, *EverQuest* is a combat game, whereas *Ultima* is a virtual world in which you can 'live'.

Ultima Online has been a very interesting experience. We had very modest expectations and ended up with a success which is so big Origin is devoting itself to the next round of products which will all be completely online.



A rare audience with Lord British in the land of Britannia

"In *Ultima Online: The Second Age* there's 30 to 50 per cent more geography to explore. The game also includes things like a universal translator, so that you tell it what your native tongue is and all text is translated accordingly"

Edge: So how better or bigger is *Ultima Online: The Second Age*?

RG: *The Second Age* is a substantial rewrite of the original, but it still runs as an expansion of *UO*. The game includes entire new continents. There's 30 to 50 per cent more additional geography to explore. The game also includes things like a universal translator, so that whenever you install that game you tell it what your native tongue is, and all text that comes from your computer or goes into it is translated accordingly. Of course, it's by no means perfect for those people who want to talk in slang, which usually happens in the game. Mostly, though, when you're trying to communicate with somebody, it's like having a Babel fish in your ear. We've removed the language barriers. We actually have an exclusive gaming licence for a technology used with Yahoo and AltaVista. The code is written to decrypt Webpages into native languages. We took that same code and just do a line at a time, using it to translate text in the game.

Edge: Can you relate a little about *Ultima Online*'s depth of play?

RG: There are things like animal taming; people can go out in the woods and look for them and then they can be used to guard the house or as companions – whatever you decide. Blacksmithing is probably the most popular skill in the game. With blacksmithing you can build weapons and armour, and make them higher quality so they last longer and do more damage. And at the highest level of blacksmithing you can actually put your mark on the tools so people know where the weapons come from. People can seek you out and you could make a living out of being, for example, the most famous blacksmith in the game. There's also things like cooking. Now, you may think this is simple, but we have a sophisticated selection of things to prepare, so you can use a wide variety of ingredients, there are all kinds of flowers, veggies and fruits to harvest. By mixing the ingredients and cooking properly you can create a wide variety of meals. Not only do those meals look good, but they will have a nutritional value based upon the ingredients. And, similarly, it's important to get your food at a place that's reasonably healthy, rather than risk being damaged by eating bad stuff.

It's hard to know where to start or stop. There are healing people to help you out and less positive things like lock-picking. There's magic and mining... actually, this is one of the best systems in the game, because going down the mines is dangerous for an untrained blacksmith, so he will hire a miner to go down and bring back lots of ore. Of course, the miner then has the problem of coming back with a big quantity of very valuable ore and so the miners need to hire fighters to escort them back and forth from the dungeons. They, in turn, are wearing out their weapons, so they buy new ones from the blacksmith, and so the cycle continues.

There are more cycles like this, especially with tailoring, where there are dozens of clothing styles and so on. In the virtual world it's harder to recognise someone by face, so people identify their friends by their attire, by their dress. And a good way to have an individual presence in the world is to wear something different. In fact, older gamers wear very unique clothes – you can tell the long-term players because they're really well accessorised. The drive to look cool is another major economic system in the game.

Edge: You must, obviously, know of the per-minute billing phone time that hampers online gaming in the UK. Do you feel that will have an impact on its success?

RG: Obviously, the telecom problems of Europe are complex. Problems with online gaming in general are complex. However, they aren't *Ultima Online*-centric. Connectivity issues, however, will impact the time that people actually spend playing. There are games like *Diablo* or *EverQuest* where you can raise a level every hour or two of gameplay. What that means is that within 100 hours of gameplay, you're beyond the top of their scale. That basically means the game is over. We're creating a game where people will be coming back month after month. So it's purposefully slow. We don't want people to be buying a house until after a month or so.

If people are playing *Ultima Online*, that has to be the dominant thing that they are doing online. [During a convoluted piece of spoken arithmetic, Garriott calculates that British gamers – using BT – will pay roughly as much as their American counterparts to play for a third of the time.] So it's going to take three to five times as long – in real days – to get a house. Or more money. But I don't know that we could really address that within the game.

Edge: How do you prevent gamers from feeling aimless in a huge, persistent online world?

RG: Solo games are these great architectured adventures where you can feel special while alone. A massively multiplayer game like *Ultima* is a place where you're not alone, but as you've noticed, it's hard to have direction in your mind. A lot of our players are actually quite upset that *Ultima Ascension* is the last singleplayer game we will be doing for a while. People think that's really tragic, and I see what they mean, because I really enjoyed those personalised adventures, too. But I wouldn't go so heavily into online gaming if I didn't feel I could solve this problem.

Many gamers like the idea of a buddy or two to come with them on an online adventure. Here's the kind of thing I have in mind: you invite your friends around to your online house. And then you say, just for the sake of example, that there's a 'Star Trek'-style Holodeck in a building down the road. You know that leads into one adventure or another, so you and your friends use it and, sure enough, you're out there in an adventure. The best bit is that that adventure will be scripted for those five people only – as a design and a story for a set amount of players. There's a singleplayer intimacy to these events that makes it all the more engrossing for the participants. When finished, they can return, put their trophies on the wall, put their money in the bank, and sit around, drink a beer and talk about it. I think you *can* get the best of both worlds in one game.

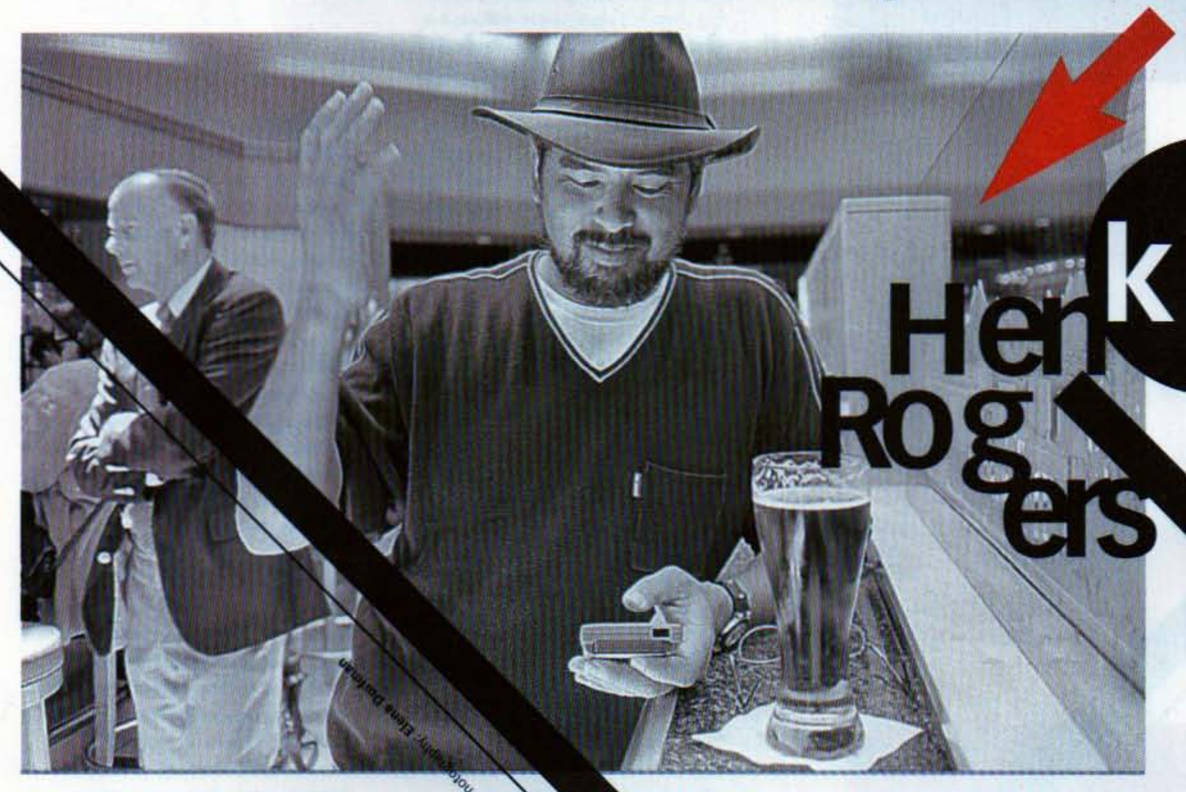
Edge: So if you're so keen on making your online games more accessible and compelling, are you looking at the consoles – in particular, Dreamcast – as a logical step?

RG: It's an interesting question, and something that we need to consider carefully. We don't by any means have a stable answer right now, and we don't have a Dreamcast game in development. However, we do regularly bring about this as something to consider.

The reason we haven't got one in development right now is that our four development teams at Origin are very PC-orientated design centres, and Origin as a company has not ever successfully developed a console game. One of the problems is that there are people like me in the company, who will always be 'bigger, bigger, bigger, complex, complex, complex' thinkers. We're hardcore PC gamers, and I'm not sure, quite frankly, whether we could create the best Dreamcast-specific game. You know, one that didn't require a hard drive or certain other technical aspects that the *Ultima* breed needs. Plus, is *Ultima Online* really appropriate for the sensibilities of console players?

MR TETRIS

No, not coder Alexey Pajitnov, but **Henk Rogers**. **Edge** recently met him and discovered one of the videogame world's true visionaries



Photography: Elena Dorfman

BACK IN 1989, ROGERS BROUGHT THE GAME HE'S PLAYING, *TETRIS*, TO THE MACHINE HE'S HOLDING, NINTENDO'S GAME BOY. *TETRIS* HAS MADE MILLIONS

San Francisco International Airport

It could happen like this. Say you're a frequent business flyer, about to pull the red-eye from Los Angeles to London. The smog has almost killed you over the last two days; the airport could push you over the edge.

Fortunately, as a First Class ticket holder you're royalty for a day. Feeling only slightly guilty, you circumvent the weary cattle-class for the express check-in and within five minutes you're in the business lounge, eyeing the discreet, mahogany-fronted departure screen.

An hour clicks on to your departure time. As so often happens, boarding is delayed. "Figures," says the guy sitting next to you. You turn, but he's ignoring you, entranced again in the videogame he's cradling like a prayer book. Odd in these circles, where *The Wall Street*



Journal is a more usual companion, but then this guy invites attention with his white suit, deep tan and flamboyant floral shirt. Except he's glowing with the confidence of the international entrepreneur, making everyone else appear ill at ease.

You don't know it yet, but he is **Henk Rogers**, the chairman of Blue Planet Software, USA. Back in 1989, he brought the game he's playing, *Tetris*, to the machine he's holding, Nintendo's Game Boy. *Tetris* has made untold millions; it is worth several times that to Nintendo. In fact, if you agree that *Tetris* sold the Game Boy, then it's actually made Nintendo billions. And if you believe that *Pokémon* reinvigorated the Game Boy in Japan – and, arguably, thus Nintendo – well, work it out.

As a keen follower of the videogame industry, you've read all about Rogers in David Sheff's seminal *Game Over* book (published in 1993). You don't know what he's been up to since *Tetris* – and you won't be able to resist asking about the past. But right now Rogers is experiencing the I-can-still-save-this delusion familiar to millions of *Tetris* players across the globe. Despite a great start, the multicoloured blocks are piling up like skyscrapers in boomtown Tokyo. And no, he isn't getting the four-unit-long 'get out of jail' block...

Ten minutes later

So you've left Japan?

Henk Rogers: Yeah. I've been there for 18 years, and that was enough. I believe the industry is headed in a different direction – *Windows* and the Internet. I wanted to be in it, not out of it.

Why California?

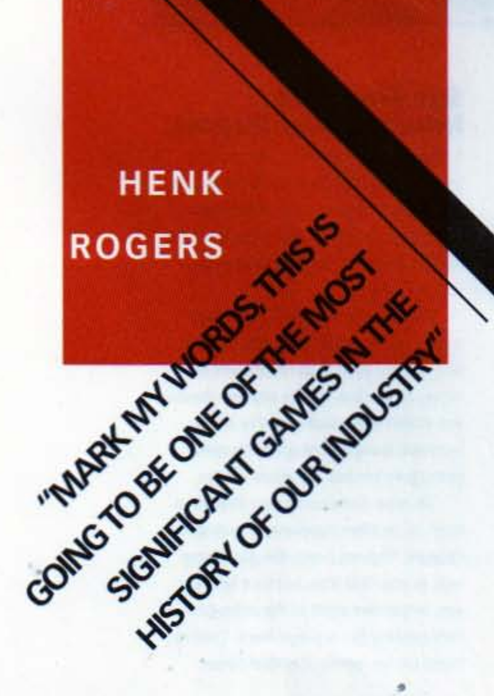
HR: Well, originally I wanted to be in Hawaii.

Rogers has a house in Hawaii. He sails its choppy waters, a full circle back to his surfing days as a student at the island's university. As an aside, he helped Square to set up its Hawaiian honeypot, designed to lure SGI artists from colder climes.

But he left Hawaii for San Francisco, where, in 1996, he founded his company Blue Planet Software. Inside prime real estate just off San Fran's Union Square, his developers are working on the official sequels to arguably the most successful game of all time. Meanwhile, another of Rogers' interests, The Tetris Company, is making sure it stays that way.

Meanwhile, in Russia, the aftershocks of the *Tetris* deal live on in Animatek, the 3D graphics company he founded with *Tetris* inventor Alexey Pajitnov.

But before you can talk about the future, you can't help visiting the past.



Budapest, Hungary, June 1986

As the '80s drew to a close, Gorbachev's Glasnost was opening up Soviet technologies to the west. It was also about to expose the USSR's cumbersome bureaucracies to the double-play of western capitalism.

Back in '86, when London-based software agent Robert Stein first encountered *Tetris* at a Hungarian computer centre, glasnost hadn't been invented. *Tetris*, however, was already a couple of years old. But ageing technology was never going to be an issue with this game.

Within six months, Stein had sold all the *Tetris* rights, except the arcade and handheld versions, to Spectrum Holobyte (eventually to become Microprose) and Robert Maxwell's ill-fated Mirrorsoft.

As Sheff reports in *Game Over*, it was never clear exactly what rights Stein had to sell. His telex-driven dealings with the Russian Academy of Computer Sciences went on for two years before he was finally granted the computer rights to *Tetris* that he had already sold to the publishers – one of which had already released a best-selling PC version of the game in the US.

Sadly, Mirrorsoft and Spectrum Holobyte understood their *Tetris* rights to be more extensive than they really were. They'd awarded Japanese computer game rights to Rogers' Bullet Proof Software in Japan and, more importantly, they'd exchanged *Tetris* rights for consoles in North America and Japan to Atari, in exchange for a mediocre title, *Blasteroids*.

After six months of flights and phone calls to Japan, Rogers managed to sub-license the Japanese home videosystem rights from Atari – and that meant access to Nintendo's Famicom, the console that ruled Japan.

Eventually, Rogers would have to fight for those rights a second time. But first he had to sell *Tetris* to the Japanese.

"I FIGURED *TETRIS* WOULD BE THE PERFECT FIT FOR GAME BOY"



Tokyo, Japan, Christmas 1988

During the summer that Rogers pursued the home console rights to *Tetris*, he had lunch with Nintendo of America's head man, Minoru Arakawa, in NCL's Kyoto headquarters. Inevitably, *Tetris* came up. "Mr Arakawa, do you know about this game called *Tetris*?" asked Rogers. "Mark my words, this is going to be one of the most significant games in the history of our industry."

Six months on, Rogers' company had only rustled up a mere 40,000 pre-orders for the entire Japanese market. "It was a horror story," he remembers. "We were a small publisher and we didn't have the power to get large numbers out there for Christmas."

Rogers had long ago won the ear of Nintendo president **Hiroshi Yamauchi**, first meeting him to secure a highly unusual advance to manufacture Famicom cartridges for a Bullet Proof Software version of the ancient Japanese boardgame, go. Even as his 8bit cartridge went through Nintendo's approval process at Kyoto, he was granted another audience with the big boss.

"Mr Yamauchi, this is possibly one of the greatest games of all time," Rogers told the president as he revealed his disastrous pre-orders. "I don't know whether it's because of the incompetence of my sales staff or my marketing staff, but this title is too important for you not to help me out right now."

So Yamauchi called in none other than **Shigeru Miyamoto**. "Is this a great game?" he asked the father of Mario. "Yes," was Miyamoto's reply. "How do you know?" asked Yamauchi. "Because all the secretaries, the accounting people and everybody else is staying late and playing it."

Rogers recalls the moment with a smile. "I could just see a fuse blow in Mr Yamauchi's head. It was like: 'Damnit!'"

Yamauchi's response was swift. He ordered Nintendo's Seal of Approval for the product and got Nintendo's sales force to badger distributors into ordering more copies. "It was like an earthquake rippling from the room," Rogers laughs.

The result? A mere 30,000 more orders. "It was just ludicrous," says Rogers, not unreasonably. "We were a pip-squeak publisher and we'd already burned through our entire advertising budget."

Inevitably, *Tetris* was put in front of Christmas shoppers who'd never heard of it. The game didn't sell, and distributors started cutting the price. "I ordered my sales guys to frantically call all the distributors and say, 'Don't let it go down, it's going to come up – this is a different type of game, it has a different sales curve'," Rogers reveals. How many marketing people have made desperate requests like that? Yet *Tetris* really was different. "In February they ran out of stock and the price went back up," remembers Rogers with relish. "We ended up selling two million units."

Moscow, Soviet Union, February 1989

"A very interesting bit of history," Rogers reminisces. "And this all happened while I was in Moscow. The February screecher."

Rogers was in the Soviet Union chasing the handheld rights to *Tetris*. Arakawa had revealed to him the top secret Game Boy. Rogers immediately saw that the Game Boy *Tetris* rights would be a licence to print Yen: "I figured *Tetris* would be the perfect fit for Game Boy. It had a small screen, so it'd be hard to see bullets. A game with big geometrical objects was much more obvious."

Rogers arrived in Moscow on a Tuesday, determined to get the handheld rights without recourse to the agent Robert Stein. Little did he know that both Stein and Mirrorsoft's Kevin Maxwell had independently arrived to meet the Russians. Rogers wasn't even sure where in Moscow they were based, so his first instinct was to track down the game's creator, Alexey Pajitnov.

He spent Wednesday looking around for a go player, hoping to use the same sort of route into Moscow that had so successfully worked in Japan with Nintendo. But, by law, nobody could speak to him.

HR: On the second day I hired an interpreter and she knew exactly where to go. She knew the company – Electronorgtechnica. What I found out later was that interpreters were all KGB. They were all cute and they were all ready to go to bed with you if you were doing anything 'interesting'! She was

Back in the USSR

Of course, the USSR is Russia nowadays, and Rogers continues to exert an influence. Founding the Moscow software group Animatek with *Tetris* creator Alexey Pajitnov was partly a way to help the man he owed so much to. But, more importantly, Rogers recognised the skills, particularly apparent in reverse engineering, that Pajitnov and his fellow programmers could bring to the table.

Pajitnov, his associate Vladimir Pokhilko and Rogers founded Animatek in 1988. The company set about creating 3D graphics software, with the main aim being the creation of artificial environments. Rogers had been won over by a virtual aquarium they successfully created on a 386 PC.

Animatek's staff had swelled to nearly 100 by 1997, as it turned out award-winning graphics software created for PCs while others looked only to SGI. The animation sequences created by its programs such as *World Builder* are startling. Blades of grass rustle in the wind while gorgeous 3D hills roll away, bedecked with shimmering trees.

Naturally, when Rogers says Animatek will soon be creating the same scenes live, the jaw drops. "We can do nature realtime on PlayStation 2," he claims.

He says Animatek is close to combining its animation suite *Varimotion* and a character modeller called *BonesPro* to create *RealTime Bones*. This, he says, will be able to knit together animation sequences dynamically ingame.

"The problem with motion-captured sequences is you can't sew them together," he explains. In contrast, *RTB* promises smooth sequences created on the fly.

"When my player barges into another in a soccer game, they will react," he explains. "Right now, they don't even know they exist."

Rogers says Animatek is lining up a secret next-generation hardware partner for its software. It's most likely Sony, but you half hope he's going back to Nintendo.

With Pajitnov creating games up at Microsoft, the Russians working on leading-edge animation software, and Rogers pushing buttons everywhere, the class of *Tetris* remains very much alive and kicking.

tetris



very attractive, actually, and very helpful.

So did you?

HR: I wasn't important enough! I was just there for silly computer game rights!

That afternoon, Rogers found himself in Electronorgtechnica (Elorg), an outfit set up to make deals with the west on behalf of the Soviet nation's academies and industries.

Inside the building, which Rogers says was "a relic – some count's grandiose house, having been completely misused," he hammered through negotiations with Evgeni Nikolaevich Belikov, Elorg's vice president.

"It was three hours of interrogation," Rogers recalls. "I taught them everything they knew about the industry." Convinced, the Russians asked him to put forward a proposal and asked when he'd be back in Moscow. "I'm not coming back to Moscow," replied Rogers. "Either we have a deal or we don't – this is the way things work in the rest of the world."

Rogers had no idea Kevin Maxwell was also talking *Tetris* with Elorg – whose execs were putting their newly acquired knowledge of the games industry to good use. He vaguely guessed that Robert Stein might be in Moscow, but he couldn't have imagined that the Russians were juggling meetings between all three players.

Rogers made a crucial call to his Japanese lawyer. "You have 24 hours to make me a contract that does not use any big words, because I am going to have to explain every single damn one," he told him. It worked. Rogers says Belikov was taken aback by the 'dream contract'. "There was actually stuff in there for them!" he boasts.

Still, the entrepreneur now had to argue his case against that of Kevin Maxwell, who Belikov finally admitted was also in negotiations.

Why do you think they chose you?

HR: Kevin Maxwell was trying to pull politics on them. Rather than saying, 'We'll give you a good deal,' he was saying, 'My father is going to call up the KGB'.

The legend has it that Robert Maxwell brought *Tetris* up in talks with Gorbachev in London…

HR: That meeting was supposed to take place but it never did. There was an earthquake in Armenia and Gorbachev had to cut his trip short. Now there's Divine Intervention for you!

Having successfully concluded the deal for the handheld rights, Rogers says the Soviets asked him about coin-op rights. Tengen (then Atari in Japan) had the arcade rights – which it had sub-licensed to Sega in Japan – and they had asked Rogers not to talk about coin-op rights, so he didn't. Then came the sucker punch. "They said, 'We'd like you to make a deal for the console rights'. The rights I had already bought from Tengen!" The rights to his best-selling game in Japan.

The Soviets were gobsmacked, to say the least. "They had never given away the rights to consoles," Rogers says. "I was a pirate in their eyes! Tengen was probably one of the most litigious games companies in the industry and I was just a small potato, I couldn't see how I could fight them." He eventually agreed to find a partner with whom to enter battle.

The (Next) New Tetris

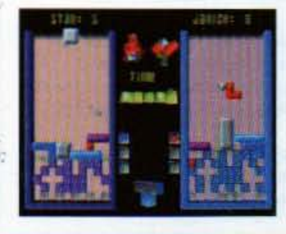
Blue Planet Software wanted to push *Tetris* in two ways. First, it would build on the multiplayer element – Rogers likens games to sports and sports involve competition. Second, Rogers wanted *Tetris* – like go – to have a built-in handicap system, so players of unequal ability can enjoy a competitive match.

Two different *Tetris*es have resulted. *The Next Tetris*, created for the PlayStation and PC, introduces the concept of suspension and gravity. The *Tetris* blocks are made up of different colours. If a block juts out over a gap and is unsupported by blocks of the same colour, it breaks away and falls.

Unsurprisingly, it's a simple idea that works well. At E3, a Japanese competition winner obliterated all-comers by using the segmented blocks to put together spectacular multi-line combos.

Meanwhile, *The New Tetris* fits well on the N64 (Nintendo having insisted on a unique version). Returning to Pajitnov's original inspiration (pentominoes) the game adds the challenge of creating geometric shapes from similarly coloured blocks while still clearing lines. Completing lines eventually sees players construct one of Blue Planet's idiosyncratic takes on the Seven Wonders of the World.

Both titles allow players to thwart an opponent's game. And winning three games improves your rank and thus your handicap. "What we're doing is standardising the ranking system," Rogers says. "Just like when I went to Russia to play go, I could play someone I'd never met before at TNT and I'd know it would be a fair game."



***The Next Tetris* (PlayStation version): suspension and gravity taken to new extremes**

"It was really scary because I was with Nintendo, and Sega had licensed not only arcade but also Mega Drive rights," says Rogers. Now all these deals were on shaky ground. "Sega could have taken the [home console] rights and then said to me, 'Sorry, you don't have those rights any more – you never did'. So I talked to Nintendo."

The confusion was traced back to an almost symbolic lack of reference to 'personal' in a statement giving Stein rights to the PC and C64 computer versions in early Elorg negotiations. The licensees had read all kinds of systems into the ambiguous statement. "In Russia, the word 'personal' didn't exist!" explains Rogers. "But when it finally came down to a court case it turns out – especially since they had 'Commodore' and 'computer' in there – that they knew exactly what they were doing when they entered into that contract."

The trial didn't last long. "The judge threw them out," says Rogers. "We never had to testify. Mr Belikov was going to testify. I rented a red Corvette and drove him around the hills of San Francisco. He still remembers that."

Glasnost!

HR: Yeah, a lot of glasnost!

What is glossed over in Sheff's book is just why Nintendo of America was so keen to help Rogers. After all, within weeks, Arakawa-san and Howard Lincoln made an epic sally into Moscow to secure the console rights from the clutches of Mirrorsoft and thus Tengen/Atari.

"Nintendo, at that time, was going through a different battle with Tengen over the rights to make cartridges," explains Rogers. "Tengen was going to make cartridges without Nintendo's manufacturing and their first product was going to be *Tetris*! Basically, I handed them a silver bullet with which they could shoot Tengen," he admits. "That's why they left everything to come to Moscow. It wasn't because they thought *Tetris* was the greatest game in the world, it was because they thought they could stop Tengen."

"They not only stopped Tengen and made a fortune," he adds, "but Tengen had to bury 300,000 [NES *Tetris*] cartridges."

They know how to bury things at Atari, don't they?

HR: They do! They have the technology! They also had to bury 300,000 Sega Mega Drive cartridges in Japan. For the longest time I was *persona non gratis* at Sega, understandably. But life goes on. I couldn't have survived having to bury 300,000 cartridges. My way of securing my rights was to get a strong ally, and my ally was Nintendo.

"NINTENDO WAS GOING THROUGH A DIFFERENT BATTLE WITH TENGEN OVER THE RIGHTS TO MAKE CARTRIDGES. I HANDED THEM A SILVER BULLET WITH WHICH THEY COULD SHOOT TENGEN"

The Tetris Company, San Francisco, 1995

The story is one of the industry's most convoluted tales. That one of its iconic titles has also had the most troublesome of pasts seems mythic. But it's something that Rogers asserts will never happen to *Tetris* again, and he has set up a company to ensure it.

The results of the eventual litigation against Tengen were console rights lasting until 1995 for Nintendo. Mindful of the court case to come, Nintendo had assembled a paper trail tracing the game back to *Tetris* creator Alexey Pajitnov.

"That didn't usually happen in Russia because it didn't mean anything," says Rogers. All the Soviet players, from Pajitnov to the computer centre and Elorg, were locked into the contract. The rights lasted for ten years – from 1985 when Pajitnov had created the game.

"Everybody thought it was going to be a dead issue after ten years," says Rogers with a smile. "They're kicking themselves in the ass right now."

And that's where you stepped in again?

HR: Yeah. In 1995 Alexey licensed all his rights to Blue Planet.

But what rights does he have?

HR: Well, the copyright, for one. It's very complicated. The Russians don't agree that he has any rights. They still don't. But they definitely have the trademark.

And the Russians – Elorg – that's now a private company?

HR: Right. But I've always done business with them, I've made them a lot of money. So when push came to shove, when Alexey



was firmly in my camp, I changed the whole relationship.

How?

HR: I said, 'Look, we shouldn't fight about this. We should put all our rights into one company called The Tetris Company'. I make all these names up.

What happened next?

HR: Everyone who claimed they had any rights in *Tetris* licensed their rights to The Tetris Company. Now there's one vehicle with undisputed rights to *Tetris* – trademarks, copyrights, everything.

And who owns that?

HR: It's 50 per cent owned by Blue Planet Software and 50 per cent owned by a company called Games, which is a subsidiary of Ramtech, which is a subsidiary of Elorg.

The Russians...

HR: The Russians. Blue Planet Software is also the world's exclusive agent to *Tetris*. If anyone wants to license anything to do with *Tetris*, from *Tetris* wallpaper to making *Tetris* for car stereos, they go through Blue Planet.



Having clocked up over 30 million sales in its Game Boy form, *Tetris* has been a formidable force in videogames. But Rogers says the story is far from over.

"We do much more than just wait for the companies to talk about licences," explains Rogers. "We plan the future of *Tetris*. We ask what we need to do to make this the Coca-Cola of computer games. *Tetris* is the first computer game that has had a shelf life of more than a couple of years. I like to call it a computer sport. What we do is try to standardise the rules."

Thus, Blue Planet Software has created a document entitled 'What is *Tetris*?' which defines Pajitnov's classic game. It covers the speed of the blocks falling, the rotation mechanism, everything. The subtle variations of previous *Tetris*es are an anathema to Blue Planet's brave new vision, in which the whole world plays the same game.

"Alexey's original dream was to have a *Tetris* player from one country play one from another country and have an Olympics," says Rogers. "And we're actually going to do that."

"The question is whether it will it be the summer Olympics or the winter games," he jokes, before adding more seriously: "It's our hope that other products will come up to the same level and become sports."

It's vital to Blue Planet Software that the brand strength grows, rather than diminishing. With TV manufacturers requesting the rights to put *Tetris* in TV controllers, Blue Planet Software has had to explicitly define a handheld *Tetris* with a smaller play field. It already has a million-selling handheld unit that it secured with Nintendo-like ruthlessness.

HR: In fact, we preceded the Tamagotchi boom in Japan. We sold three million of those little *Tetris Juniors* through BPS, my Japanese company. The hardware was done in China.

So you're in the hardware business, too?

HR: Well, we found these pirate products. We went after the source and took over their production, basically. We made it legal. You know – that way nobody stops making money. If you start a new production somewhere else, then somebody is going to lose out. Then they're going to find other ways to get to your market.

If someone has done a very good copy of your game somewhere, then God rest their little hearts. Give them a reward, turn them legit – they've obviously done their homework.

But Rogers doesn't hesitate to use the full force of the law in protecting his hard-won money spinner.

Litigation has taken out Japanese pirates. Internet sites have been shut down, and illegal handhelds caught at the border and crushed.

Tetris is a hard game to protect because its simplicity makes copying trivial. "There was a big uproar," admits Rogers. "People were saying, 'How dare you stop us doing this? This is a public domain game, blah, blah, blah', and telling us what Alexey originally intended. Full of misinformation."

Bar the odd celebrated case like *Donkey Kong*, intellectual property rights haven't received much of a test in the videogame industry. The obsolescence built into videogames makes court cases far too protracted. What's more, patents are meaningless because of the way the industry has evolved. All the major Japanese players hold a battery of patents ready to fire if anyone gets jumpy. (Oddly, Casio has a rather forlorn patent for 'stuff falling down from the top of the screen.')

Rogers, unsurprisingly, has no qualms about the directions he's taking *Tetris*. "What is going to preserve and allow this industry to grow and prosper?" he asks. "Intellectual property rights allow companies to invest real money in the development of new product. Look at any country where they don't have intellectual property rights. You won't find any interesting intellectual property being created there."

Well, except for *Tetris* in the USSR...

Yokohama, Japan, 1980

Another suit throwing dirt on the coffin of gaming? While Rogers is clearly a businessman first, it would be very wrong to think that was the complete picture. He initially cut his way through the corporate Japanese industry as the very antithesis – a gamer and enthusiast. In Japan he is known as the father of roleplaying games. Miyamoto's *Zelda* might even be said to owe a debt to this gaijin.

In 1980, Rogers created a computerised version of Dungeons & Dragons called *Black Onyx* on a home computer called the 9801. Spurning derisory offers from game publishers, he decided to market his game himself.

"When Christmas came my distributor ordered 600 copies. I'd already burned that in 'Conan'-type advertising," he says. *Black Onyx*'s woes prefigured the *Tetris* saga, still years away. "Nobody understood what the hell they were trying to sell. Come February we were looking at the end of the world."

Did the Japanese have any history of roleplaying games at all?

HR: Zero. D&D in the US came out of civil war miniatures and guys at GenCon doing simulations with lots of troops. When Gygax put Tolkien into that world, it was an innovation.

Sorry, we seem to be digging back

into the history books once again.

HR: That's okay. It was tough. I didn't speak Japanese, so I got an interpreter. I physically went to every game magazine in Japan and showed them the title. I put in all the editors' names and explained how to play. By March the magazines were all going nuts. By April we were getting 10,000 orders a month. Big time!

That's pretty amazing.

HR: I guess I am the father of roleplaying in Japan.

Think of the royalties...

HR: Ouch!

Have you spoken to Miyamoto about that and *Zelda*?

HR: Well, he's a good friend. But no, we don't specifically talk about RPGs. We talk about games in general and the philosophy behind them. The problem is, if you say something game specific, then there is the problem of, 'Oh, you got that idea from me', or vice versa. He's a very simple guy – his reward for *Mario* is that he doesn't have to wear neckties.

Blue Planet Software, San Francisco, 1999

Rogers stresses that Blue Planet is more than just a *Tetris* company. He believes that videogames aren't delivering what the average person wants. They're violent, the learning curve is too steep, and they're made for gamers. Blue Planet will deliver "games for the rest of us," Rogers promises, and it's suggested to him that that should become the trademark.

He talks of a still-secret figure-skating game targeted at 11-year-old girls. A novel concept, it's not going to interest **Edge** readers, but it could well sell millions.

Back to the 1980s for a moment. The first couple of *Black Onyx* products did very well for Rogers. Yet, soon after, he began to run into problems as rival games started to appear. "I'm a purist. My form of roleplaying is that you, as a player, get transported into another world. You are experiencing that world," he says.

Rival products took a different tack, in which players assumed the role of characters. "Most of the other RPGs in Japan had Japanese anime characters transformed into the computer world. Everyone plays with the same character. That's the opposite of what I'm trying to achieve," explains Rogers. "There's no firstperson responsibility for what the character does in their games."

Responsibility is key. In *Black Onyx*, violent players who attacked weaker, fleeing monsters were cursed with bad karma. Not the most sophisticated philosophy, true, but a different branch to today's legions of *Doom*-alikes.

"There's a time to fight and a time not to fight," says Rogers. "In most games there's no distinguishing between fighting for the right reason or the wrong one." Rogers believes computer games are too important to be left to a bloodthirsty minority. Games like *Tetris*, he argues, offer the same training possibilities that sports once fulfilled for those facing a lifetime of physical labour. "Guess what? Physical labour was 100 years ago," he quips. "It's mental labour that we're going to be facing in the future. When children play computer games, they're learning what they're going to have to manipulate in their lives."

Continuing the comparisons with sport, he points out that the physical pursuits range from no-holds-barred 'ultimate fighting' to baseball. "We're at a point in history [with computer games] where there are no gloves yet," he says. "As the gloves come on, the more massmarket sports become. It will be the same with computer games."

"I always look at the game world we build as other places for us to go," he continues. "And what have we built so far? Most of them are hell and almost none of them are heaven. We're creating hells for our children to live in."

"I ALWAYS LOOK AT THE GAME WORLD WE BUILD AS OTHER PLACES FOR US TO GO... MOST OF THEM ARE HELL AND ALMOST NONE OF THEM ARE HEAVEN. WE'RE CREATING HELLS FOR OUR CHILDREN TO LIVE IN"

Rogers is out there somewhere, flying into the wind, turning *Tetris* into an international sport, making middleware work, pounding pirates, looking to sell games to teenage girls, and fuelling the whole shebang with one of the most enduring products ever. While most of the industry chases its tail in ever-decreasing circles, Rogers is looking for the escape trajectory.

His aim is the same as it has always been – success. If he ends up changing the industry along the way, so be it. Just as in a game of go, Henk Rogers' early moves may only now be coming to fruition.



TESTSCREEN

The definitive monthly assessment of the world's latest videogames

Once upon a time...

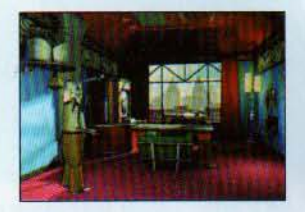
Despite the industry's massive technological advances in the last 20 years, it's a sad truth that only a proportionally microscopic number of games manage to muster up storylines that won't have you savagely condemning their feebleness.

The very nature of certain games excuses them from having to provide a narrative, of course, but of those that do, too many offer scenarios whose flimsiness could be eclipsed by the meandering wibble of primary school children. It's an insane situation when you consider the potential benefit that lies in strong plotting. Take last year's *Grim Fandango* and *Half-Life*, for example – both games crank up their immersive value via narrative. Fastforward to the present: Namco's decision to include a developing storyline in its latest *Ace Combat* title (see p84) rescues the game from the realms of mediocrity.

The *Resident Evil* series is a particularly interesting specimen. Now headed towards its third PlayStation instalment, developer Capcom is clearly aware of how little the working formula can be altered (by definition, certain elements must remain constant). *Dino Crisis* would appear to be an appropriate example, as it's very similar to the *Resident Evil* games in many respects, yet also very different. Realising that toying with the series' essence was likely to alienate more *Res Evil* fans than the number of newcomers it could potentially attract, Capcom has therefore been forced to focus on the only aspect open to great change. True, the first *Resident Evil* offered a story written with the assistance of a dictionary of horror film clichés, but subsequent additions to the definitive survival horror game have undoubtedly grown in complexity and intrigue. Naturally, they still adhere to Romero's 'Living Dead' house style, but expect the plot element of the bargain to improve along with the graphics.

It would be false to say that storytelling is a dead art within the development community, but as all other aspects of videogame production are being further tamed by the week, it can only be a matter of time before professional scriptwriters become staple components among software company staff rosters. Revolution Software realised this when developing its immersive point-and-click adventure *Broken Sword*, hiring a trained writer to craft the script. Infogrames did the same for this issue's highly ambitious *Outcast* and the benefits are immediately obvious.

Until other developers follow suit, though, gamers should be prepared to be asked to save humanity from the megalomaniac bad guy and his brainwashed army of evil. On their own. Again.







They don't tell them like they used to (from left): *Grim Fandango* from masterful story-teller LucasArts, Capcom's intriguing *Resident Evil* series, and Infogrames' heavily plotted *Outcast*



Index

Edge evaluates games on a scale of ten, where five naturally represents the middle value. A game receiving a 'seven out of ten', for example, is a very competent title with noticeable flaws but which should still appeal to a considerable range of players – naturally more so to those who favour the title's particular genre. It does, after all, score two points above average and should therefore not be considered as such.

Edge's rating system is fair, progressive and balanced. An average game deserves an average mark – not, as many believe, seven out of ten.

Videogames on the **Edge**

This month's hand-to-eye coordination enhancers...



OutRun (Saturn) Sega

The **Edge** team gleefully relived Yu Suzuki's racer this month. Resisting the urge to hum along to Magical Sound Shower proved nigh impossible.



Mario Kart 64 (N64) Nintendo

It may lack the superior attributes of its 16bit predecessor, but as the only way of enjoying *Mario Kart* thrills fourplayer style, this just has to suffice.



Tempest X3 (PS) Interplay

A long overdue reunion with one of Atari's best, as **Edge** blew the dust off its copy of the third interpretation. Messy, but so bloody addictive.



Bust-A-Move 2 (PS) Acclaim

Another creaky title, but it was stacked next to *Tempest X3* and ignoring it proved too difficult. Will the sheen-like appeal *ever* rub off this game?

OUTCAST





The six worlds cover wastelands, forests and swamps, as well as teeming cities and verdant pastures





The ability to switch from thirdperson to firstperson is useful during combat, but *Outcast* is about exploration, not killing. The ostrich-like Twon-Ha is therefore a useful vehicle for covering large distances quickly (above)





The Enhanced Vision Device is one of the most useful gadgets. Not only does this pair of binoculars give up to 12-times magnification, but it also has an X-ray option (above)

If first impressions really count, *Outcast* is doomed. An ambitious title, it starts with a whimper. Compared to the visual crispness that Voodoo and TNT-equipped gamers now expect as standard, its opening level is initially underwhelming, bitty even. But what else can you expect from a game whose voxel 3D engine means it can't be accelerated by those muscular, poly-crunching graphics chipsets?

But if *Outcast* doesn't generate beautiful-looking corridors, it's because there are no corridors in its world to be generated. Instead, at the heart of Appeal's masterpiece are its six autonomous, free-roaming environments, where the voxel-based engine justifies its existence by freeing up the dynamic camera. From a firstperson perspective the viewpoint can be shifted to thirdperson, with the camera pulled up so high that the sheer scale of the scenery begins to dwarf the characters.

Think rolling plains that stretch to the horizon and you'll be close. Think *Turok* and *Wild Metal Country*, but richly populated with indigenous species, temples, cities, barracks, rivers and hundreds of NPCs, and you're closer still. Then go ingame, flip open a pair of binoculars, pump up the magnification and suddenly you really can see for miles.

The other impressive facet of the engine is the flexibility it gives ingame cut-scenes. Whenever you talk to another character, the dialogue is framed with different camera angles. This is crucial for two reasons: first, according to Bruno Bonnell, Infogrames' flamboyant head honcho, *Outcast* is the first videogame that tries to be an interactive movie. It's not the first, of course, but compared

It's in Shamazaar, probably **the most beautiful** of the levels, that the **full scale** of *Outcast* becomes apparent. Not only are the levels enormous, but so is **the amount of work you need to perform**

Format: **PC/Dreamcast (PC version tested)**

Publisher: **Infogrames**

Developer: **Appeal**

Price: **£35 (PC)**

Release: **Out now (PC); TBA (DC)**







Due to the scale of *Outcast*'s worlds, map familiarity is an important asset. This is particularly true in the bustling markets, or 'Boks', of Talanzaar (above)



Interaction with NPCs is vital for information and resources

to the restrictive tension of *Metal Gear Solid*, *Outcast*'s cinematography is effortless. Second, there are 65 different characters that you need to be in repeated contact with, either to get information or resources. And that's a phenomenal level of dialogue. Even with cut-scenes driving the pace, many gamers will find the amount of information *Outcast* throws out too daunting to handle.

But if few things in *Outcast* are obvious, its main character, a 'Duke Nukem-without-the-sleaze, called Cutter Slade, is instantly recognisable.

Hurled from the earth of 2007 into a parallel world known as Adelpha, Slade awakes to find that the three scientists he's supposed to be protecting are nowhere to be found. And if he has little idea where he is, the player is just as confused. Initial pieces of information don't help much either. You find out that Adelpha is under the dominion of the evil Fae-Rhan. In return for Slade playing the role of planetary messiah, the oppressed inhabitants, the Talans, agree to help find the scientists and the probe they've been sent to repair.

Slade's quest starts in the paddy fields of Shamazaar. Probably the most beautiful of the levels, it's here that the full scale of *Outcast* becomes apparent. Not only are the levels enormous, but so is the amount of work you need to perform. In keeping with its action-strategy-adventure tag, it's an open-ended game. Many of the Talans ask you to perform tasks for them, which require either finding someone or an object, maybe from another level. And while it soon becomes confusing, it's this that gives the game its immersive quality.

The number of barracks and enemy patrols creates additional obstacles. Most of the time Slade remains relatively underarmed, meaning that Rambo-style assaults are impossible. Reconnaissance and talking to the natives are crucial. Given the right incentives, many of the regions' leaders can be persuaded to undermine the soldiers' morale by withholding food, for example. Equally, Slade's weapons are neatly balanced. There is a sniping rifle, but it only fires sleeping darts – an important restriction as the open environments are a sniper's dream. Gadgets such as holographic decoys, trip-wire mines and limited invisibility expand your tactical options.

It may be a difficult game to get to grips with, and it has a steep learning curve, but *Outcast* provides a depth of experience that proves addictive. You have to play hard to understand its world, but you always feel as if you are actually there. And while it's unlikely to be a mainstream hit, its fans will be fanatics. As for first impressions, well, would you rather read the book or the cover?

Edge rating:

Eight out of ten







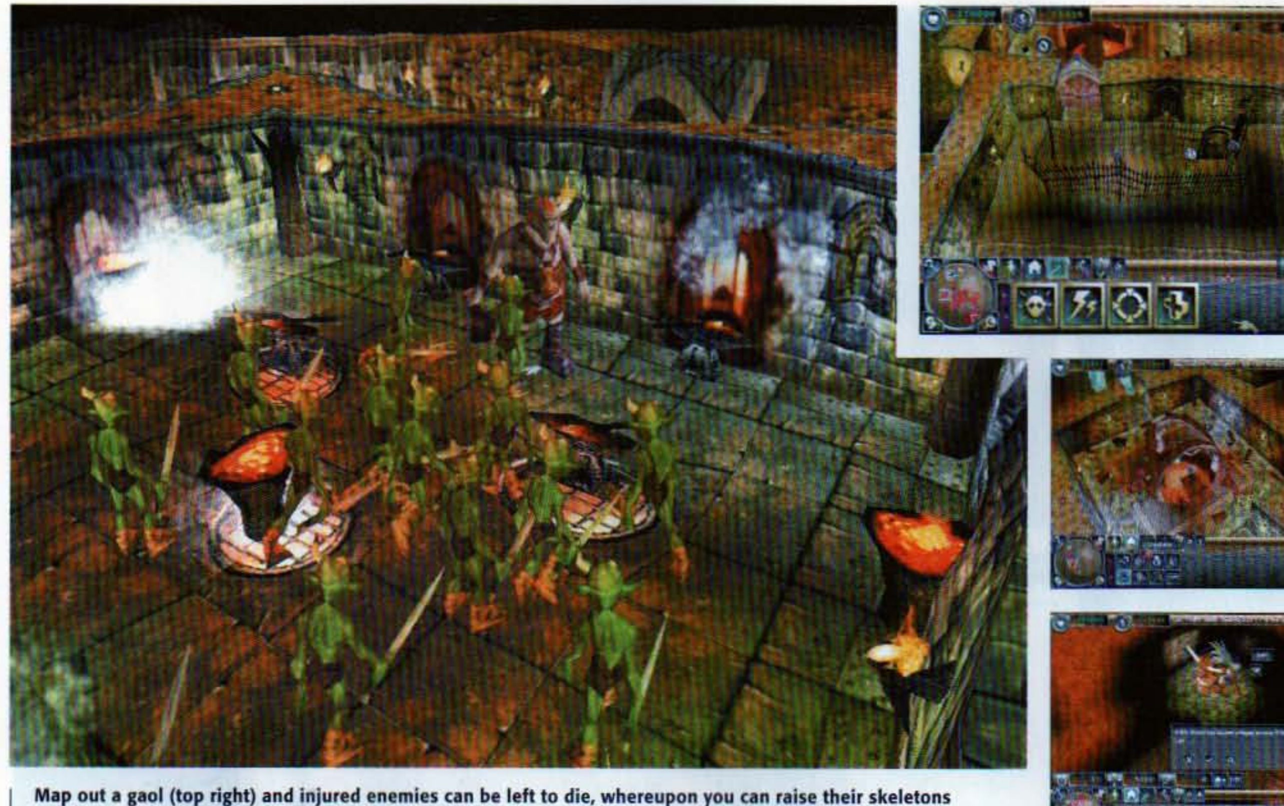
Intra-level travel is possible using a Daoka (top). The inventory can be ordered using F keys as shortcuts (centre) – there is a sniper rifle but it only fires sleeping darts (above)





Creeping around when invisible is a useful way of getting into heavily guarded areas, although Slade can't pick up objects in this state (left)

DUNGEON KEEPER 2



Map out a gaol (top right) and injured enemies can be left to die, whereupon you can raise their skeletons to join your own evil army. The undead prove to be fearless warriors but are hampered by their brittle structure





Sneakily attacking the lord of the land by burrowing through the walls is the best way to avoid certain death. Defeat him and seize the Portal Gem (top)

Despite his departure from Bullfrog shortly after *Dungeon Keeper*'s release, Molyneux's own minions have toiled away on the sequel for the last two years, adapting, improving and polishing it to capitalise on the numerous innovations that were never fully realised in the original. Finally, *Dungeon Keeper 2* has emerged as a complete and supremely well-balanced expansion-versus-resources realtime strategy game.

Your resources are gold to pay minions and build rooms, plus mana to cast spells. Gold seams can be mined, while mana is automatically generated for every square of land you own. Interestingly, you can't 'buy' units – you have to attract them with rooms they like, such as libraries for the warlocks and workshops for the trolls, while maintaining comfortable living areas and plenty of food.

While it might be tempting to build everything you can, space is your third resource. Solid rock has to be negotiated, sometimes forcing you to find new open areas for rooms, or necessitating a tight squeeze into any space you can. Some levels have been deliberately designed to induce claustrophobia and force immediate expansion into enemy territory.

Most of your demonic control is done from a top-down 3D view that can be rotated and zoomed. The default angle is perfect, so you never find anything hidden behind walls, unnoticed and unreachable. Forget the *Command & Conquer*-style view, though, because using it offers no direct control over any of your creatures. While imps can be told what to do – burrow through this rock, collect that gold – they have their own ideas about priorities.

Likewise, your other creatures tend to go about their own business, such as training, sleeping, eating and researching, and will only attack if your dungeon is in danger. Even then you're not able to send all your beasts to a particular area until you've researched a Call to Arms spell. But while this might sound unusual, it actually frees you from the babysitting that's required by some strategy games, leaving you free to get on with



The heart of the dungeon must be protected from attack



The Mistress takes pleasure in testing your grisly torture chamber (top right)





Format: **PC**	
Publisher: **Electronic Arts**	
Developer: **Bullfrog**	
Price: **£35**	
Release: **Out now**	



The hatchery is the sole source of food for all of your lackeys, and you'll find that it's usually knee-deep in chicken feathers (left). Keeping your armies of creatures happy is essential if evil is to vanquish the good

the two very important aspects of *Dungeon Keeper 2* that facilitate a coordinated attack. The first is that, since you are an omnipotent being, you can pick up and drop any number of creatures on to any area you have claimed. The equivalent of *Command & Conquer's* tank rush is to grasp everyone and drop them on top of any square touching enemy territory.

A subtler method is to possess one of your creatures, whereupon the 3D engine zooms into a firstperson perspective. From here you can use a somewhat clumsy system of ordering a number of your creatures to follow you, producing a controlled attack. Your presence 'within' them even bestows extra strength and rewards nearby companions with increased courage.



Possessing creatures means you can use their special skills

Most of **your demonic control** is done from a top-down 3D view that can be **rotated and zoomed**. The default angle is perfect, so **you never find anything hidden** behind walls

And yet, despite needing some very wily strategy to succeed in the second half of the game (the first half is a well-created tutorial), it isn't that hard to fail – it's more a question of whether you'll succeed quickly and keep your dungeon heart intact. If a first attack fails, second and subsequent assaults will eventually wear down the opposition. The biggest problem is actually working fast enough to keep the treasury properly topped up.

While the chance of failure should be higher, the level design is exemplary. Gone are the endless maps of the original, where the same dungeon needed to be built each time. Perhaps taking a lesson from *Red Alert*, each level brings a fresh surprise and demands for new strategies. They also extend the story, and most have a puzzle that requires a modicum of careful thought.

Despite the complexity of the game, the control system rarely gets in your way and the artificial intelligence and path-finding are extremely impressive. Other than some minor niggles, it's difficult to imagine how it could be improved.

A diabolical shot in the arm for the strategy genre, *Dungeon Keeper 2* again confirms that there is life at Bullfrog after Molyneux.

Edge rating:

Eight out of ten

V-RALLY 2







Four-car pile-ups are an all too common occurence, and, impressively, computer-controlled opponents are almost as likely to mess up as you are





Like its predecessor, *VR2* features an extreme variety of challenges, from the icy tracks of Sweden (left) to sun-drenched Corsica (right)

Along with *TOCA Touring Car*, the original *V-Rally* heralded a new era for PlayStation driving games. Until that point, seminal arcade titles like *Ridge Racer* and *Daytona* had prescribed how racers should look and feel, but suddenly developers began to move away from those stylised blueprints and introduced a new regime of realism and intricacy. *V-Rally 2* continues this legacy, but also makes a few new advances in both playablity and authenticity.

> *V-Rally 2* is an **intense, exhausting experience** demanding concentration, technique, planning and **sheer physical stamina in a way** arcade conversions **can only dream of**

Once again, drivers are required to race over a number of surfaces, such as dirt, snow, Tarmac and gravel, in a variety of different countries, and as proved so popular in the original, the tyres, gearbox, chassis and brakes can all be customised according to the demands of a circuit. Veterans will also be pleased to note that a grand total of 60 or so tracks are on offer.

The tough, uncompromising gameplay has also returned. *V-Rally 2* is an intense, exhausting experience demanding concentration, technique, planning and sheer physical stamina in a way arcade conversions can only dream of. Don't expect to jump right in and start winning races. Learning the delicate balance between speed, brake, handbrake and gear control is essential – as is mastering the handling peculiarities of the three classes of vehicle (World Rally cars, 2l kit cars and 1.6l kit cars). These machines roll, skid, slide, crumple and crash with unnerving visual and physical realism, forcing a committed and serious approach to racing. It's no good going into a hairpin bend at 70mph hoping to bounce off the car at your side – chances are, you'll both roll right over, allowing more skillful drivers to chicane between you.

This is a good, solid driving engine, there's no doubt about that, but there









The singleplayer, twoplayer (top centre) and fourplayer (top right) options are pleasingly fast and fluid

Format: **PlayStation**

Publisher: **Infogrames**

Developer: **Eden Studios**

Price: **£45**

Release: **Out now**

are a few eccentricities. Smaller cars tend to bounce around after a knock like they're filled with helium, even if you've put the suspension on its hardest setting, and there is little feeling (or visual evidence) of friction between the tyres and road surface, which can make the cars look as though they're simply gliding around the track. However, what you can sense is the varying interaction between the car and different surfaces: on snow you can pretty much powerslide around the whole circuit, whereas asphalt and gravel require a more respectful approach.

You can even use the roadsides to your advantage – in the UK, for instance, the slight, slippy banks can tip your car and throw it around corners. Predicting how swerving off course will affect your race therefore becomes a key talent, and adds a tactical spin to the experience.

Visually, *V-Rally 2* is as flawless as the hardware allows. From the holiday-postcard views of Corsica to the medieval villages of Italy and the snowy pine forests of Finland, the scenery is always interesting and well-crafted. The cars, too (there are 16 initially available, plus ten bonus vehicles), are perfect replicas. **Edge** favourites include the Lancia Stratos, Mitsubishi Lancer and the Peugeot 106, although there are plenty more to whet the appetites of rally fans.

Importantly, there are many new features, too. The fourplayer splitscreen mode is a welcome bonus, as is the excellent track editor which allows you to create your own circuits, place them in any of the featured countries, and then pick the time and weather conditions. Both of these add significantly to the game's longevity and show that Infogrames is not simply cynically exploiting the *V-Rally* brand. Finally, there are now four modes of play – time trial, arcade, trophy and championship – the latter featuring the player's car alone competing against the clock – just as the sport should be.

While the driving experience here is never dull – and regularly hints at realism – it's never quite as convincing nor responsive as the *Colin McRae* engine. What it does do is offer a consummate challenge and a huge range of peripheral features. All of the game options (apart from time trial) come in three stages, made up of several races each, and the challenge of getting to expert status will test even the most hardened drivers. Not perfect, then, but certainly closer than most other PlayStation driving games are likely to get.

Edge rating:

Eight out of ten



The various camera options on offer include this bonnet view









Presentation is impeccable throughout the game. Replays (above) show both driver and co-driver in the car – a great touch

ACE COMBAT 3 ELECTROSPHERE

Format: **PlayStation**

Publisher: **Namco**

Developer: **In-house**

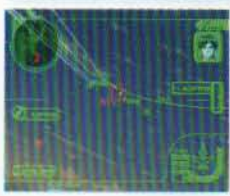
Price: **¥5,800 (£30)**

Release: **Out now (Japan); TBA (UK)**





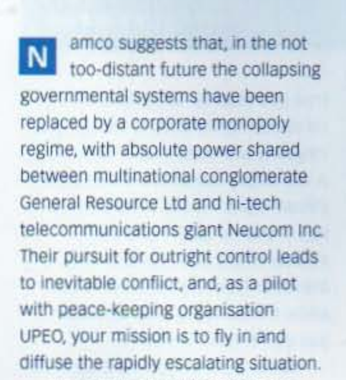




By marrying storyline elements to the action, Namco has increased the lifespan of a genre that inevitably suffers from fairly limited and repetitive playability

Namco returns with a futuristic, far darker interpretation of its *AC* series, though the gameplay remains refined





Using the afterburners results in some great effects, such as heat haze

Namco suggests that, in the not too-distant future the collapsing governmental systems have been replaced by a corporate monopoly regime, with absolute power shared between multinational conglomerate General Resource Ltd and hi-tech telecommunications giant Neucom Inc. Their pursuit for outright control leads to inevitable conflict, and, as a pilot with peace-keeping organisation UPEO, your mission is to fly in and diffuse the rapidly escalating situation.

Unusually for a videogame, this isn't some simple 'one-man suicide mission' – help is at hand from fellow UPEO pilots Erich Jaeger, Fiona Chris-Fitzgerald and Rena Hirose. To be honest, they seem quite happy to leave most of the actual enemy engaging down to you, but at least they tend to work well as bait, attracting the attention of a few enemy pilots, which is useful in later missions when the sky seems full of hostile aircraft eager to fire missiles in your general direction.

Initially, it's difficult to see how, other than in graphical terms (the game includes some impressive visual touches), this latest venture differs from the previous *Ace Combat* games – the early missions offer little in terms of innovation, and even later operations are nearly identical in structure, with straightforward intercept, escort, or search-and-destroy sorties, take-off and landing opportunities and the odd canyon run.

However, *AC3 Electrosphere* introduces a multibranching storyline which immediately makes this a more involving and rewarding experience than either of its predecessors. Unfortunately, given the substantial amount of speech, it's also one that cannot be recommended to anyone not fluent in Japanese, as most of the plot subtleties are inevitably lost.

As your character's faith in UPEO's intentions falters, you're tempted throughout the proceedings to switch sides by pilots from either of the warring corporations. Swift decisions based on precious little information have to be made, and your actions have a dramatic effect on the game's denouement and its ultimate outcome.

While it maintains the refined play mechanics of its ancestors, *AC3 Electrosphere*'s unravelling structure results in the series' most engaging title to date, saving it from the rather shallow experience that it could have so easily offered. Anyone wanting to recreate some 'Top Gun'-style action should look no further, although most would be wise to wait for the PAL release.

Edge rating:

Six out of ten

APE ESCAPE







Capturing AWOL monkeys has rarely been so much fun. Yes, the graphical glitches are part of the package, but they don't interfere with the gameplay



The diverse level design keeps your interest high throughout

Format:	**PlayStation**
Publisher:	**SCEE**
Developer:	**SCEI**
Price:	**£35**
Release:	**Out now**

It could be pure coincidence, of course, but you could be easily forgiven for thinking a PlayStation platforming project has little chance of being greenlit these days unless it features a level set on the Great Wall of China. [Together with an ice-based world, naturally.] Having made it through SCEE's QA department, *Ape Escape* has both. It also has floating, moving, and collapsing platforms, numerous puzzles, collectable items and countless other elements that could have been taken straight out of Miyamoto's book on platform gaming.

The plot has similarly emerged from an imaginative tome. A mad professor, whose time machine has just become operational, is relying on you to retrieve a hefty group of monkeys scattered throughout time before humanity alters significantly. Their leader, Spectre, had until recently led a blissful life as a performing circus ape. Stumbling across the professor's Peak Point Helmet (which enhances mental capacity), Spectre has evolved into a megalomaniac tyrant, consumed by the desire to place monkeys at the top of the evolutionary table, thanks to some time-travelling machinations.



Collecting hidden Spectre coins opens up three fun bonus games

But *Ape Escape* isn't a simple attempt at cashing in on the *Mario 64* phenomenon. In many respects it's a brave title. Making it exclusively compatible with the Dual Shock controller is a bold move, but one that's afforded SCEI the ability to implement new gameplay ideas. Controlling Spike's movements with the left analogue stick while the other operates the imaginative weaponry is commendably intuitive and simple to master.

When there are problems, they're mostly of a technical nature. The draw distance may not set new records, yet there are still too many occasions when slowdown is noticeable. The camera angle has a tendency to be too high, making it awkward to get a proper idea of your surroundings. Yes, there is the possibility to look around in firstperson, but it does break up the action. Minor graphical glitches and collision-detection problems are also frequent – as a world it doesn't feel quite as solid as, say, *Spyro*'s.

Like *Spyro*, *Ape Escape* is undeniably aimed at the younger gamer: initial levels are full of helpful messages that experienced players will undoubtedly find annoyingly intrusive. Every time a new weapon is granted, a training level must be completed, and anyone requiring more practice is free to visit the training ground and repeat these levels. Yet, there is a good pace to the proceedings. The various stages are sufficiently distinct from each other, offering increasingly difficult challenges, while most of the weapons are genuinely innovative, and sneaking up on a monkey to slam your special capturing net over it remains remarkably satisfying.

While not essential, the overall package offers enough novelty to make it worth serious consideration for anyone tired of the many me-too platformers.

Edge rating:

Seven out of ten









The ingenuity behind the analogue-only controls really emerges when using weapons, allowing you to perform actions otherwise impossible without extensive button combinations

DYNAMITE COP 2

Format: **Dreamcast**

Publisher: **Sega**

Developer: **AM2**

Price: **¥5,800 (£35)**

Release: **Out now (Japan); Winter (UK)**







Paying homage to coin-ops such as *Double Dragon* gives *DC2* instant appeal and a heavy burden of expectation. Sadly, it does nothing to advance the genre







Rather than scrolling from one area to the next, action sections are occasionally linked by dubious moments of button or stick bashing. Or dull FMV

Originally created for Sega's Model 2 coin-op hardware, *Dynamite Cop 2* has been skillfully ported to Dreamcast. Rising from the smouldering ashes of a once-pivotal game genre, AM1's series pays homage to classics such as *Double Dragon* and *Final Fight*. In the sometimes unfortunate coin-op fashion, the gameplay is more hotdog cart than a la carte – functional rather than fulfilling. However, in a world of *Metal Zelda Kazooies*, *DC2*'s simplistic fare proves initially refreshing. Sadly, the aftertaste is somewhat sour.

Selecting one of three near-identical characters, you (and a friend, if one is at hand) must fight through masses of terrorist types to rescue a kidnapped girl from her woefully unimpressive captor. As with all of *DC2*'s foes and locations, the standard of artwork would barely scrape a GCSE pass – particularly when compared to the Naomi-based *Zombie Zone*. Certain explosive effects are disastrously realised: Sega should perhaps have subcontracted the volatile visionaries at Rage to create bangs to equal those of *Incoming*.

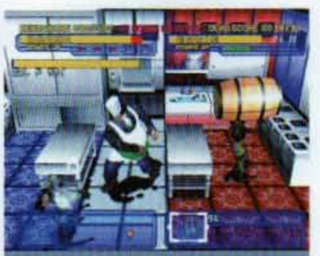
The three basic missions all take place aboard a cruise ship, although only a small selection of locations are shared. Unlike the aforementioned classics, *Dynamite Cop 2* doesn't scroll from one setting to the next, which verges on missing the point of the genre entirely. Although the camera dollies side to side in some sections, it's only in a limited fashion, with locations linked by slices of FMV instead. By having its action fixed in single rooms, the game is tramping the same turf as Capcom's splendid *Power Stone* (see **E**70), and from that standpoint there's really no case to be made for purchasing this.

Having said that, it would be unfair not to mention the game's ability to put a smile on your face for the first couple of plays: being able to beat opponents with the bowls of apples, deckchairs, vacuum cleaners and giant fish that are scattered through the levels is tremendous fun. The problem, in truth, is that *DC2* should never have left the five-minute gameplay world of the arcade.

Delving through the laborious options menu reveals that Sega's conversion team has lumped in various survival and twoplayer fight modes – not to mention an emulation of the dreary 1980 coin-op *Tranquiliser Gun*. However, despite its efforts, the repetitive gameplay and pitiful artwork conspire to leave *DC2* looking as dated as the classics it attepts to ape. If you crave an alternative beat 'em up, hold out for *Zombie Zone*'s conversion to Dreamcast – or invest in the sublime delights of *Power Stone*.

Though crude on occasion, the graphics are bright and breezy



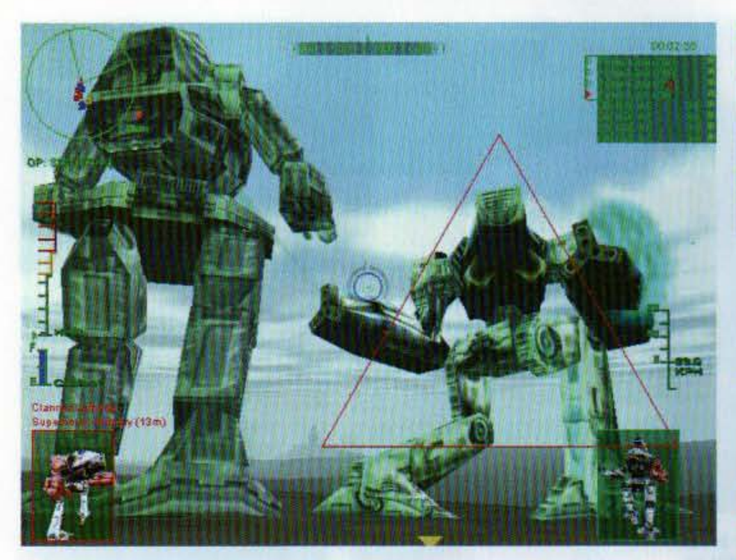


***Dynamite Cop 2* blows a lot of its entertainment value the first time you play it, by revealing almost all of the oddball weapons on offer**

Edge rating:

Five out of ten

MECHWARRIOR 3



You'll need a powerful PC to fully appreciate *Mechwarrior 3*'s potential, the landscapes are vast and detailed and the Mechs are beautifully realised



Format: **PC**

Publisher: **Hasbro/ Microprose**

Developer: **Zipper Int.**

Price: **£35**

Release: **Out now**



Independent torso movement adds tank-like flexibility to movement and weapon usage. Naturally, this initially takes some getting used to

The world of the Mech has always been one of the more powerful, if unlikely, visions of a future war. The idea of huge bipedal fighting machines makes no sense whatsoever, yet the image of these tank/robot hybrids stomping into battle is one of the most evocative that the games industry has dreamt up. There have been rivals to the *Mechwarrior* franchise, most with a stronger arcade bent, yet it's the pseudo-simulation complexity of this original series that has always impressed most.

Development duties have been passed on to Zipper Interactive, recently responsible for the rather vapid *Recoil*. Thankfully, there's no sign of dumbing-down here – *Mechwarrior 3* is certainly glossier than its forebears and does a good job of keeping up with the graphical expectations of the modern PC gamer, but at its core beats the heart of a simulation. Independent torso movement and an option to look around freely mean that navigation, particularly mid-combat, is a hugely demanding task. It's this flexibility that makes piloting a Mech so enticing, though, and it also musters up a splendid learning curve.



Even the weapons systems are complex, with all manner of linking options available to you

There are further simulation-like issues, not least the problem of overheating. Take too many hits or pump out any of the 35 weapon types too eagerly and coolant problems will result in temporary shutdown. Because it's avoidable, it's a penalty that's nail-biting rather than frustrating. Elsewhere, jet packs add a bizarre manga-esque touch to the action, while between-level screens offer the opportunity to customise Mechs and even make use of salvage gathered from the wreckage of enemies. This scavenging is handled by mobile field units, which also offer mid-mission repairs, making it wise to defend them from enemy Mechs.

A powerful PC is needed to get the most from *Mechwarrior 3*, but the result is a landscape filled with detail and battles that often feature a dozen Mechs duking it out with their explosive weaponry. Moreover, they move with a real sense of weight, giving the impression that this really is a clash of metallic titans, so it's something of a shame that they don't always move very intelligently. Units sometimes have trouble traversing the rolling terrain and it's often possible to fight just one enemy at a time, while others sit in view – yet illogically out of range.

Such glitches aren't frequent enough to ruin the carefully constructed illusion, but they do highlight the slightly lumbering nature of these games. *Mechwarrior 3* is the best of its kind, but it's highly likely that in the UK, at least, this may not be enough to guarantee mainstream success.

Edge rating:

Seven out of ten





The environment is impressively depicted, the far horizon and smart cloud textures adding a genuine sense of scale to the game

WORLD DRIVER CHAMPIONSHIP

Format: **Nintendo 64**

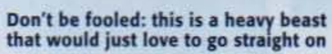
Publisher: **Midway**

Developer: **Boss Game**

Price: **$50 (£32)**

Release: **Out now (US)**




Don't be fooled: this is a heavy beast that would just love to go straight on




The cars are not officially licensed (although they are all based on real vehicles), cannot be tweaked between races and do not suffer damage





The normal (top) and letterbox hi-res modes (centre). Oddly, there's no Ram Pak support so you lose half the picture. The twoplayer mode's fine, though (above)

Ignore any advertising rubbish you may see claiming *Gran Turismo* has finally arrived for the N64, because the chances are that you'll hate *World Driver Championship*. You will initially, at least.

The game box may promise over 30 cars with realistic physics and handling dynamics, but as even the most inept driver will testify, real cars do not behave like the ones depicted in *World Driver Championship* – certainly not racing cars, anyway. The early vehicles handle far more sluggishly than any **Edge** has encountered in a racer in the last few years. Drive into a corner and only the most extensive analogue stick deployment will dissuade your racing machine from stubbornly continuing on a straight line course in a demonstration of inertia at work that would make Newton blush. As you step into faster and lighter apparatus, an inevitable benefit of winning races, the handling does improve, although it's a style that requires some getting used to.

There are no such criticisms regarding the graphics, though. The cars are impressively detailed and the ten circuits, plus their alternatively routed siblings, offer a raft of engaging features, such as the obligatory plane, helicopter and even hang-glider combinations furnishing the sky immediately above the track, taking your mind off the racing and combining to form a very solid-looking environment. It certainly looks among the best N64 racing titles to date.

Those who persevere are rewarded with a fairly absorbing racing game. By then, controlling the car so that corners are negotiated without hitting the surrounding barrier should be second nature, and playing with the quick-race arcade mode will soon spur you on to tackle the championship mode.

Composed of ten cup challenges of increasing length and difficulty, your goal is to enter and win the invitational event (at least seven first place finishes in the preceding nine cups are necessary), opening up another ten-cup round featuring better cars (GT1 category instead of GT2). An interesting addition to this is your ability to switch between the seven teams available during your campaign. As your world ranking among the drivers improves (you begin ranked 30th, moving upwards with points earned from finishes), other team bosses invite you to switch sides, promising you a more successful future courtesy of higher performance machinery. You're free to remain loyal to your initial employer, of course, although a little game of musical chairs could hasten your chances of securing a commanding drive. It all depends on your overall performance, though.

While certainly one of the less welcoming racers around, *World Driver Championship* eventually emerges as a likeable example of a genre that's still reasonably under-exploited on the N64.

Edge rating:

Six out of ten

BRAVEHEART





A hardcore strategy game, 13th Century Scotland is not for the faint-hearted

Format: **PC**	
Publisher: **Eidos**	
Developer: **Red Lemon**	
Price: **£40**	
Release: **Out now**	





The versatility of the game engine allows you to fight small-scale, covert missions like these, or it can pan out to handle massive Highland brawls

The raw power throbbing beneath the beige bonnet of today's PCs is starting to produce some extraordinary games. *Braveheart* is one of this new breed, remarkable not for its resemblance to the film (of which there is little) but for its rejuvenation of that PC gaming staple: the strategy genre. This revival centres around the combination of strategy elements with *Myth*-style realtime combat, the player's actions and decisions in either domain having profound consequences on progress in the other.

Most of the time the player will be buried deep in management screens, monitoring the political and economic climate. These stat-heavy zones will be familiar to *Civ* players, although they borrow heavily from old Impressions' stalwart *Lord Of The Realms 2*. But while the strategic side is undeniably old school, it delivers the goods, allowing you to meticulously manage every aspect of his clan, from diplomatic relations to, bizarrely gratifyingly, haggis production.



Unfortunately, most of the game's spent looking at screens like this

Intelligently taking advantage of the medieval Scotland setting, *Braveheart* instantly pitches the player into a volatile situation where you must balance security with growth, and mix diplomacy with violence in order to survive amid fractious clan warfare. Rival powers are immediately banging on your door and you'll find that it'll be a long time before your clan is strong enough to survive on its own.

Although the process of scratching a living in the Highlands lacks the colour of *Civ*'s Seven Wonders, this is more than compensated for by the realtime combat enhancement. Every engagement can be fought in 3D sequences, whose graphical prowess is unmatched by anything else in the field of realtime strategy. Commands are again familiar, but battles take on far greater significance when the outcome affects hours of careful management. Shrewd scouting of the enemy and the production of the right weapons can mean a battle is won before the armies even meet. *Braveheart*'s espionage ranks among the genre's finest moments, allowing you to infiltrate an enemy town with a spy, then drop into 3D to scout it out in realtime. Back in the management section, an army is ordered to attack, resulting in a 3D battle where you can quickly destroy vital locations thanks to your work in the earlier mission.

Braveheart remains primarily a hardcore strategy game, despite the judicious dovetailing of its combat sequences, and these sections will destroy its strategic purity for some. Either element can be diluted, but that would rob this game of a uniqueness that other developers will soon be scrambling to imitate.

Edge rating:

Eight out of ten







In the later stages resources may be diverted into castle-building, and sieges can be fought in realtime. The hated English also become a factor

DANCE DANCE REVOLUTION

Format: **PlayStation**

Publisher: **Konami**

Developer: **In-house**

Price: **¥5,800 (£30)**

Release: **Out now (Japan)**





No amount of graphical frippery can hide the game's shallow arcade roots







Many tunes are included in the package, not forgetting the odd classic (main). Background graphics certainly help to promote the disco theme









Different songs require different degrees of control dexterity, with some tracks demanding a fair amount of mental involvement. Every move counts (above)

If you've had the chance to wander through the streets of Tokyo this year, you'll be forgiven for thinking that music-based coin-ops are the future of videogaming, given their seemingly relentless popularity among the capital's arcadegoers. You'd be wrong, of course. The Bemani novelty is expected to wear off pretty soon, although it'd be foolish to ignore the potential harnessed within this 'genre': later evolutions may well surprise many. In other words, it's worth watching.

Still, at the moment, this 'Dance Simulation Game' is raking in the Yen. *Dance Dance Revolution* may rank alongside *Parappa the Rapper*, *Um Jammer Lammy* and *Bust a Move* in the great videogame classification chart, but in reality you could easily, and justifiably, contest its presence among such titles.

Unlike the aforementioned trio, Konami's latest PlayStation title started life in the arcades (whereas *Bust a Move*, for example, has made it to coin-op status having moved over from the PS scene), and hence it's designed to neatly provide entertainment in five-minute doses – which doesn't bode well for home consumption. It's a criticism levelled at most coin-op conversions, from shallow driving games to lightgun shooters, and as much as it tries – a remixed version of the main game exists, along with a training mode and several hidden bonuses – *Dance Dance Revolution* isn't immune to it.

Yet while it fails to match the depth found in *Um Jammer Lammy*, for instance, *Revolution* does have a secret weapon at its disposal: Konami has been able to recreate the game's full arcade experience (minus the imposing cabinet), and those prepared to invest in the title should seriously consider getting hold of the dedicated controller, too (see p138). As well as inducing fond memories of playing Twister, this plastic mat allows you to play *Revolution* as its developer intended: with your feet. Using a joypad is fine if you find systematically pushing one (or sometimes two) of four directions at a specific time a thrilling and challenging proposition, but matching the onscreen instructions on a pressure-sensitive pad proves far more entertaining and much trickier.

This is undeniably its strength. As a party game, few titles can match the sight of two rhythmically challenged individuals battling for digital dancing supremacy on two plastic squares (cue twoplayer option) for pure entertainment. Then, and only then, are you likely to overlook the game's otherwise completely overriding superficiality.

Edge rating:

Five out of ten

NGPS middleware: filling in the gaps

Middleware companies and western development tools for the next-generation PlayStation

Alias|Wavefront, Canada
3D graphics (*Maya*)

Angel Studios, US
Realtime simulation (*ARTS*)

Animation Science Corporation, US
Behaviour technology (*Rampage*)

Criterion Software, UK
3D graphics engine (Renderware 3)

Cygnus, US
Virtual hardware simulation (GNU)

MathEngine, UK
Realtime physics (*MathEngine*)

Metrowerks, US
Development kit (CodeWarrior)

NDL, US
3D engine (NetImmerse)

NewTek, US
3D animations (*Lightwave*)

SN Systems, UK
Development kit (Pro DG)

Softimage, Canada
3D animations (*Mental Ray*)

Rumours concerning next-generation PlayStation development are on the rise. That the Emotion Engine has been classified as a supercomputer and denied an export licence is one of **Edge**'s favourites, albeit one with an iota of truth. In the meantime, Sony's much-vaunted middleware program has come into play. Not only does it allow developers to make better quality games, they can get started before receiving full-spec dev kits.

One of the most important middleware tools is Cygnus' 'virtual gaming' software, which simulates PlayStation 2 hardware using Linux. **Andy Beveridge** of Bristol-based SN Systems reckons this has confused many developers, however. "A lot of them think that Sony is going to make them work in a Linux environment," he says. While the final dev kits will use Linux, developers will be able to run whatever OS they like.

Most middleware vendors are currently in the process of optimising software. Paul Topping of MathEngine says that it already has a version running under emulation. The key for developers, though, is to start development now and switch when optimised code comes out. "For an initial beta version of Renderware for PlayStation 2, we are looking at August," comments **Mike King** of Criterion. "But the fully optimised version is going to take six months."

Yet one of the obstacles middleware vendors may experience is the reluctance of console developers to stop using proprietary systems. **John Austin**, president of NDL, whose NetImmerse engine has recently been added to the middleware program, believes this has to change. "People have to think about this as an economic decision, as well as a time-to-market decision," he says. Console development is becoming a lot more professional, and he's got the figures to prove it (see right).

	Proprietory engine	NetImmerse engine
First title		
Development time (engineer years)	6	4
Cost per engineer year	$85K	$75K
Cost of licence	0	$100K
Total engineering cost	$510K	$300K
Support/maintenance	$50K	$25K
Total development cost (first title)	$745K	$625K
Second title		
Cost of licence	0	0
Total engineering cost	$510K	$300K
Support/maintenance	$50K	$25K
Total development cost (second title)	$560K	$325K
Total cost	**$1,395K**	**$950K**

NDL has released a rough breakdown of the cost advantages it believes can be gained by licensing a 3D engine. PC developers have made these decisions for years. Now it's the turn of next-generation PlayStation developers to count the cost. More info at www.ndl.com/wpapers/bizcase.html

WorkStation

When **Edge** visited Banbury-based Silicon Dreams this month to see *Warmonkeys*, an 'action tactics' PC game (previewed on p24), it was somewhat distracted by Team 3 programmer **Joanne Clowes**. Not because of her excellent work on the game's productivity tools and frontend system, though, but by her hordes of offensive toys



Skull in Russian hat "Boris is a (very) senior team member, mascot and occasional voodoo charm"

Programmer goading device (common name: Furby) "Used to incessantly goad any other programmers when I'm annoyed. Tip: never wake a Furby unless you have lots of spare time or a large hammer"

Anti-design team missile "In Team 3 a good supply of weaponry is important. Juggling balls are the projectiles of choice for 'discussions' with the designers"

Members of the development community (sane or otherwise) are invited to email WorkStation submissions to **edge@futurenet.co.uk**

The Wallace and Grommit cast "Target practice for other programmers retaliating to goading by Furby. Also including lucky exam troll from my degree"

Line-up of furry animals "Pooh Bear and friends – these were a wedding present from my friends when I got married in Florida last year"

The trials of a start-up developer: part 12

After co-founding Lionhead Studios with Peter Molyneux, Demis Hassabis set up his own development house, Elixir Studios. In this exclusive diary, he chronicles the trials and tribulations of managing a team, developing a game and working all hours

Show business

"I think it was Aristotle who said that the world has just seven stories. This thought kept on going round my head during the three days I spent at E3, the world's largest computer games fair held in Los Angeles last month. 'A goddamn gibfest!' is something you're likely to hear quite a lot at these kind of shows, usually from an exuberant American demoing a deathmatch on one of the stands. This year I suspect it was more of a reference to the blood that was spilt as innovative game ideas were butchered, twisted and squeezed into small pigeon holes entitled 'realtime strategy' and 'firstperson shooter'. Maybe Aristotle was a bit generous with his seven stories...

The extraordinary visual quality of most the games on display did little to hide the lack of real innovation. Whenever I go to trade shows I try to find a day where I can wander around as a gamer, rather than as a game maker. When I'm doing this I really want to find a game that excites me, that I'm desperate to play. The thrill of finding a cool game is still one of the best things in my life, but this year I couldn't help but feel a little bit disappointed by what was on display. Where was the next *Civilization*? I looked high and low, but found little that induced the sort of butterflies I felt when I first saw Sid Meier's game.

During the week before the show, Nintendo announced initial specs for its new machine, Project Dolphin. Obviously this generated a lot of excitement, and much of the talk at the show concerned the next generation of consoles and particularly the effect these machines will have on game development. The most commonly held opinion was that development would inevitably follow the Japanese model, with teams of 200 people and budgets in excess of $30m. I'm not sure I agree with this – it's akin to saying that all hit films have to be 'Titanic'-style blockbusters, costing no less than $100m to make. Sure, a lot of the big hits will be from the *Shenmue* or *Zelda* mould, but what about the gaming equivalents of 'Shakespeare in Love' and 'The Full Monty'? Id Software, it must be remembered, has been making awesome games with a team of about a dozen people for a long time now. I doubt very much that the next-generation *Tetris*, *Super Bomberman* and *Sensible Soccer* will rely on bilinear filtering for their success. I'd like to think that gameplay will continue to be the paramount factor in a game's success and that it will still be possible to achieve this with small teams.

Incidentally, has anyone else been amused by the fact that realtime strategy and firstperson shooters now have their own abbreviations (RTS and FPS, respectively)? This makes me chuckle, because a friend of mine has these great stories about working for a huge company. He tells me that three-letter acronyms are so popular in big corporations that even 'three-letter abbreviation' has its own three-letter abbreviation (TLA). Seeing TLAs peppering the pages of game magazines therefore fills me with apprehension – are these the first real rays of a corporate dawn?

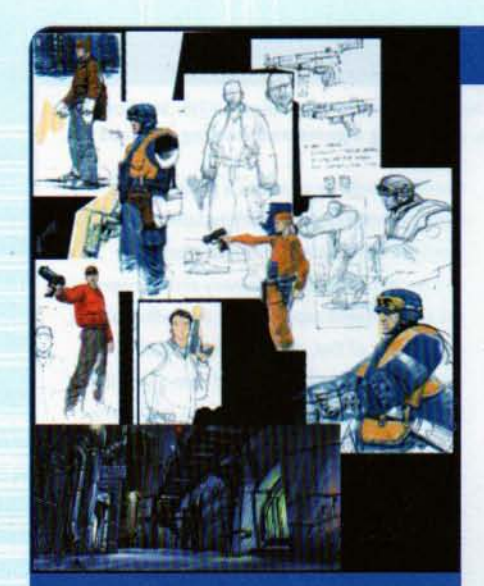
"Whenever I go to trade shows I try to find a day where I can wander around as a gamer, rather than as a game maker... and this year I couldn't help but feel a little bit disappointed by what was on display"

Something I get asked a lot is how to get into the games industry – I really sympathise with people who are trying to get in and are finding it tough. We get a lot of letters, but being a small team the opportunities are limited (we do try to give a limited number of people work experience placements, though). The games industry is a closed shop to a certain degree, but my advice is to try and get your foot in the door by any means possible. I know two producers in the industry, one of whom started as a game tester, and the other in technical support. My story is much the same. When I was 14 I entered a competition in *Amiga Power* in which the prize was a job at Bullfrog. Unfortunately, I came second (to Mike Diskett, *Syndicate Wars* creator and Mucky Foot co-founder). I phoned up anyway and managed to get a week's work experience at the Bullfrog studio. Off the back of that, after I finished school I wrangled first a summer job and then a year there. I started off as a level designer and a tester on a teaboy's salary. By working very hard I was given more and more responsibility until ultimately I ended up co-creating *Theme Park*. It was indeed a thrill and an honour to work on a game that so many people liked, and it gave me my first taste of the professional side of the industry. Since then it's been a great privilege to work in such a great area. I really wish people in a similar situation the very best of luck – stick at it; as with everything in life, at the end of the day it's how much you want it that will see you through.

The next deadline is almost upon us. Every couple of months Eidos holds a publishing meeting which is attended by the heads of all of its subsidiaries, and is both professional and brutal. Different developers take turns to present their game and show the progress that's been made since the last meeting. This will be our first, and it goes without saying that we've got to make a big impression. My social life is now a pathetic shadow of its former self and I've been considering moving into the office. I'd better hurry, though, as spaces are going fast."



Every devco is subject to regular deadlines. The Elixir team stays around the clock to meet milestones



GTA2's new look is both futuristic and retro. Lead artist Ian McQue is responsible for designing the style guide

The trials of a rock'n'roll games publisher: part two

Brian Baglow, public relations manager at Rockstar Games, recounts the tricks and traumas involved in producing *GTA2*, the sequel to one of the most successful games in recent years...

Much of the design for *GTA2* came about during the development of the first game. Many ideas and concepts that the team came up with could not be incorporated into the first game due to time pressures and the technology limitations of the time. The map and mission scripting editors just could not keep up with some of the more outrageous ideas that cropped up later in the day. The experience of creating the first game also meant that everyone had a much better idea of how far things could be pushed, and in what directions a new game could be taken.

"Every aspect of the original game was looked at to find out what worked, why it was good and how we could improve it," recalls **Colin MacDonald**, *GTA*'s producer. "We didn't want to make changes for the sake of it. We wanted to ensure that everything about *GTA2* works to our satisfaction."

Ian McQue, lead artist on both games, already knew what he wanted to do: "I wanted to completely redesign the whole look of the game. The first game was very bright, with lots of pastels and primary colours – which was great. Each of the cities worked well, too. Vice City, which was a bit of an abstraction of Miami, was very different to Liberty City, which was based on New York, but for the sequel I wanted a much darker and grittier feel, to give it a bit of an edge."

Keith Hamilton, team leader on *Grand Theft Auto*, was responsible for creating the new programming specifications. "One thing we knew even before we finished writing *GTA* was that we wanted to rewrite, well, everything," he laughs. "Technology has moved on so much since we wrote the first game that, rather than trying to adapt the existing code, it would be easier to just start again."

The team already had a rough design laid out on paper but, before any work could start, this had to be submitted to DMA's Dave Jones (the boss) and Gary Penn (creative manager) for approval. Success or failure can lie in the smallest details, so the game design is subject to a fine-tooth comb before it's finally given the green light.

One of the first contentious issues is the setting for the game. "We decided that giving the game a slight 'five minutes into the future' look would be a neat idea," explains MacDonald. "It lets us do new things with the look of the game. One thing we didn't want to do was simply recreate everything from the original. In *GTA* we had about 60 different contemporary cars. We didn't want to give people the same things to play with again." The danger is that the slightly futuristic setting gets taken too far and that the game turns into something like 'Blade Runner'. "It's not going to look like 'Blade Runner'!" argues McQue. "It's got a much more retro feel to it. The cars are styled like those from the '40s and '50s, the whole thing is going to look much more film noir than sci-fi." Eventually, it's agreed that McQue is going to produce a whole new style guide, laying out what the cars, the pedestrians, the buildings, the cops and the gangs will all look like. Even Penn is happy with this.

While the 'High Concept' conference is happening, another meeting is taking place. **Ian Ross** and **Brian Baird**, the programmers responsible for the AI and mission scripting, are meeting with the level designers to decide just how far to take things. Ross elaborates: "In the original we could have about 20 pedestrians and 20 cars onscreen at one time. Because you could drive or walk anywhere inside the city, I had to make sure that every area would have people in it and, more importantly, cars. I've been working on completely new AI and route-finding code, which means that we'll be able to have anything up to 120 pedestrians onscreen at once, and 40-odd cars – all with their own objectives and places to go." And everything is much smarter now: "In the first game, if you stood in front of a car it would screech to a halt and honk its horn. If you try that now, the car will just drive around you or, if the driver's a bit of a psycho, drive straight over you. The police are also much, much smarter. You can now have four or five police cars chasing you, and they will try to box you in, force you into the side of the road and arrest you. Having the police simply trying to ram you off the road is boring."

Baird created the mission scripting language for *GTA* and is just as enthusiastic as Ross about the new game: "There were limits to what we could do in *GTA*," he explains. "The characters in missions had only a few basic commands. They could be told to travel from points A to B, they could be used to guard an area, attacking whenever the player got within range, and they could follow the player or another character. The Krishnas are a good example of that. For the new game every single character has dozens of different commands and attributes. We've even given them line-of-sight and hearing. The number of things you can do in the game has increased by a factor of ten. There are now crimes that are nothing to do with you. So if you hear sirens getting close, you might find they're actually after someone else."



The level designers are hard at work creating new maps and missions. Improved AI opens up new possibilities

The level designers are responsible for building the maps of each area, as well as creating the missions themselves. **Steve Banks** created the San Andreas level in *GTA*: "The amount of new possibilities in the game is immense," he says. "Changing the smallest things has a knock-on effect for the whole game. For instance, in the first game we were limited to a single person in every car. Now we can have multiple passengers – cars can carry two or four people, vans up to six. If you steal a bus now, it can have dozens of people inside it, and you know what that means..."

"While the 'High Concept' conference is happening, another meeting is taking place. Programmers Ian Ross and Brian Baird are meeting with the level designers to decide just how far to take things"

Billy Thomson created the last level of the original *GTA*, Vice City. Generally agreed to be the most insane and dangerous level ever, featuring, as it does, the 'Psycho Bastard Bonus' and the, er, 'Slap the Bitches' mission. "You're not going to believe what we'll do to you in *GTA2*," he boasts. "With the new weapons, the pedestrians' line-of-sight and improved AI, we can do things like *Metal Gear Solid* – hunt people down, infiltrate an enemy gang's base... it would be really easy to do."

The bottom line for both DMA and Rockstar is gameplay. MacDonald explains: "We know that we have more depth than anyone else out there. We know that *GTA2* offers something genuinely new. The gang structure and missions offer so much more scope that we know it will be just as groundbreaking as the original. What we have to do now is make sure the game is fun. We need the controls to be spot on, we need the car handling to be perfect. Getting everything balanced, that's the challenge."

Hamilton sums it up: "The question we asked when we were creating *GTA* was, 'Would we play this game ourselves?' That's the important thing. If we're not happy with the game, how can we expect anyone else to be?"

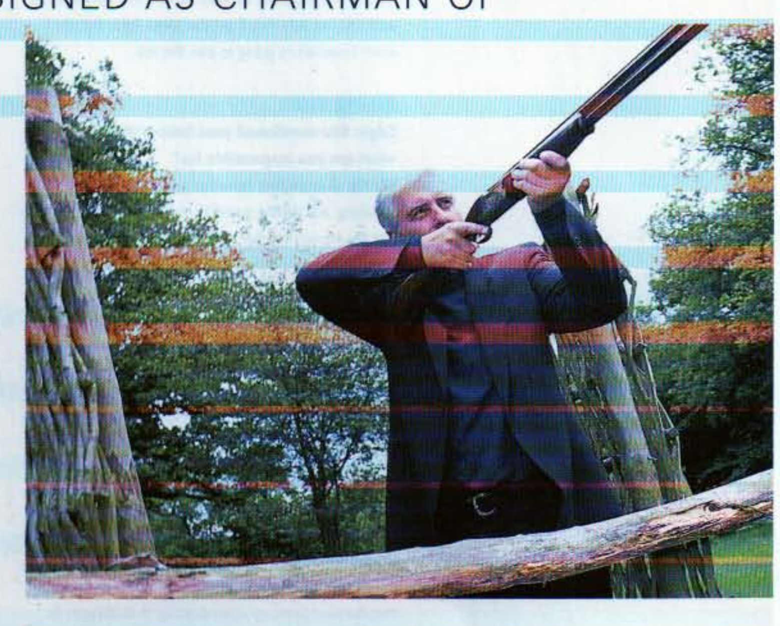
an audience with...

les edgar



Photography: Jude Edginton

HAVING HELD THE ROLE FOR 17 YEARS, ONE OF THE INDUSTRY'S BIGGEST PLAYERS RECENTLY RESIGNED AS CHAIRMAN OF BULLFROG. BUT YOU'D BE WRONG IN THINKING THAT IT WAS A PARTING SHOT…



Edge's ever-inquisitive photographer is poking around in the back of **Les Edgar**'s top-of-the-line Range Rover. "What are those – televisions?" he asks, pointing to the screens embedded in the rear of the front seats' headrests. "Sort of," says our host for the day, pressing a button which makes a PlayStation smoothly slide out, 'Star Trek' style, from beneath the rear passengers' seat. And it's not just any old PlayStation – its CD lid is finished with a wood veneer that matches the vehicle's plush interior trim. More impressively, the console's two controllers have been made in the same polished-wood fashion. Forget Nintendo's Game Boy – *this* is gaming on the go.

Such a display of wealth might lead you to perceive Edgar to be Mr Flash. Indeed, the fact that he drives a works-prepared 600bhp Aston Martin Vantage – which he will later be taking to Le Mans to celebrate the anniversary of Aston's only win – and that he actually owns the pub in which **Edge**'s interview takes place, are further evidence that he'd rather not leave his pennies to fester in some offshore bank account. But he also happens to be tremendously disarming.

After setting up Bullfrog with Peter Molyneux in 1982, Edgar oversaw the company's rise and rise, eventually engineering its sale to Electronic Arts in the mid-'90s. He's still working for EA on a limited basis, although he now chooses to work out of his 300-acre country estate in the south east of England – where he often indulges in a spot of clay-pigeon shooting – rather than an industrial estate in Guildford.

Having recently provided financial support to Bullfrog break-off group Lost Toys, Edgar is currently dabbling with many ventures, including Internet gaming, the Japanese market, and… his expanding farm. It's a wonder **Edge** was able to grab a slice of his schedule.

Edge: Do you think that, following the EA acquisition, Bullfrog really became as creatively stifling as Peter Molyneux has intimated?

Les Edgar: I think we hear a lot of, 'Oh, it's not the same old Bullfrog'. But I don't think it ever was the same old Bullfrog anyway – the company has changed dramatically every year since it started. Of course it stifles certain types of creativity – all companies do. And because Peter has very specific views about they way the development should be, he's right – for his type of game, of course. I think there's a lot of creative processing in EA, but it is different, or sometimes it is different to what Bullfrog was used to, and some people have seen that as a bad thing, and there's been a failure on a lot of people's part to change and adapt. As I said, Bullfrog has changed since day one and sometimes very significantly, but it was a very big change to go from independently developing this type of game to being part of a multinational company. That was a big deal, and it was the main reason that I stayed working for EA for four years, to help with that transition.

Edge: Would it be fair to say that EA encourages exploitation of franchises with the likes of *Dungeon Keeper* and *Theme Park*, rather than encouraging original titles?

LE: In the end, it's a tricky question, and without trying to be too evasive about it, I think EA would love to encourage original product development, but the problem is that companies like EA can't put up with the crap – as they see it – that comes with it, the sort of schedule integrity which goes out the window, the prima donna attitudes of some people who say, 'I know what I'm doing, just let me go away and soak my head in vinegar and it'll be all right in a year or two's time – just keep the money coming, by the way'. I'm not suggesting for a minute that that was Bullfrog's attitude, but you can see at one extreme that it's really hard for a company to deal with that. Speaking from personal experience, I had a problem dealing with it when we were just 30 people because the business side of the arrangement was quite difficult, so I think it is stifling in that they're faced with the choice of, 'Shall we develop this XYZ product, which could be good, or it may not be, or shall we go with the known entity?' The decision is usually made by how many can we sell, so in order to make the decision you ask a marketing person, 'How many can we sell of this?' If it's a radical new idea that doesn't fit into a slot, well, I'm not being unfair to marketing people, but if it doesn't fit into a known category it's very hard for them to assess how many they can sell. Whereas if you say, 'Well, it's a sports game', or if it's *Dungeon Keeper 2*, then they have benchmarks to go on. But they would probably be very careful about a whole new product, maybe even a new genre for that matter, in making a forecast – they'd keep them low – so therefore the powers that be are more likely to say, 'Well, this is a known quantity, we know how many we're going to sell, we know where we're going to sell it, we know how much it's going to cost to develop, let's go with it'. Ultimately, I think it *does* stifle the off-the-wall, 'I've had a great idea for a game I want to play, let's do it' approach – that disappears.

Edge: So where are those games going to come from in the absence of risk-taking?

LE: Historically, Bullfrog was its own task squad. Everybody was queuing up new ideas, and we used to have game days where we would try to assess these wacky new concepts and their potential, but now it's kind of boiled down to a small group of people who are tasked with exploring these various ideas that have bubbled up through the groups. They feedback their findings, and try to home in on one idea, so it is happening, and it's still going to come from Bullfrog people. But I think if you look at EA's business – I can't remember what the figures are and probably shouldn't tell you if I could – a very significant percentage of the revenue comes from sports and sequel products, so from a business point of view it's very, very hard for them to look outside of that, particularly when they're trying to concentrate on videogame console markets where sport is king, really. I think stuff like the more 'traditional' Bullfrog games, or even perhaps the Maxis-type products, possibly have to be exceptional. If it's a new idea then it would have to show an exceptionally clear view of what the game was going to be before it would get the green light. But some of the new Maxis

stuff looks great and I think a couple of the Bullfrog ideas that have been bandied around are wonderful as well. I'm not sure they'll get the green light, though. I don't know who's going to take the risk.

Rising son

Edge: You mentioned your links with Asia – what are you responsible for?

LE: We all know that Japanese games, generally speaking, are starting to sell better and better here. Not just the *Marios*, etc, but even more hardcore games, and our games – Britsoft games or western games generally – don't sell at all over there. Bullfrog was more successful than most, I think, with the likes of *Theme Park* and *Populous*, particularly, selling lots – in fact, at one point Japan was a better market for us than America. So I wondered whether or not it would be possible to have a game designed in the UK, for example, and then implement it in Japan – or vice versa for that matter – and hopefully cross barriers so that on day one you could launch the product and it would be suitable for both markets. We'd use the unique approach of Japanese development teams to implement it, and it would be very interesting to do that. So we started up a small group in Bullfrog to do just that and we did a test PlayStation product called *Theme Aquarium*, which was only released in Japan. It was produced in the UK but completely implemented in Japan, and it sold pretty well. It wouldn't sell here at all, but the process of actually having a producer here and a team there worked, so the next stage was to say, 'Okay, can we actually do one that can be produced in both places and work in both places?' And that's more of a task we're realising now. I think it's going to be very difficult, mainly because there is no accomplished group, other than perhaps the people who make *Mario*, for example, that really understands that cross-cultural thing. You don't particularly have groups like that in the hardcore gaming markets – you're more likely to be able to find that attitude in a massmarket group which makes 'typical' videogames such as *Mario* and *Sonic*.

Edge: What do you think Japanese developers bring to their games that maybe westerners don't? What elements have you discovered?

LE: There are some very obvious ones. If it's a strategy game, for example, there are huge amounts of detail and options in Japanese examples. In fact in *Theme Aquarium* there was much less emphasis on the graphic quality, or the action aspect of it, it was very much on the 2,000 options on every screen, because the users like to tweak everything to the nth degree and then see what happens. The quality of the gameplay was not as important as the experience of a trial and error-type experience. So that was one aspect. I think the character sets that they use, the doe-eyed characters, the cutesy little things, that's obviously an element, too. One of the things we did in the early days, indeed we tried to do it with *Theme Park*, was to make the characters kind of cutesy and very specifically for the Japanese market, and I think it worked very well. As far as other elements go, I think Japanese developers have a very good sense of what you might term the 'interactive movie'. They



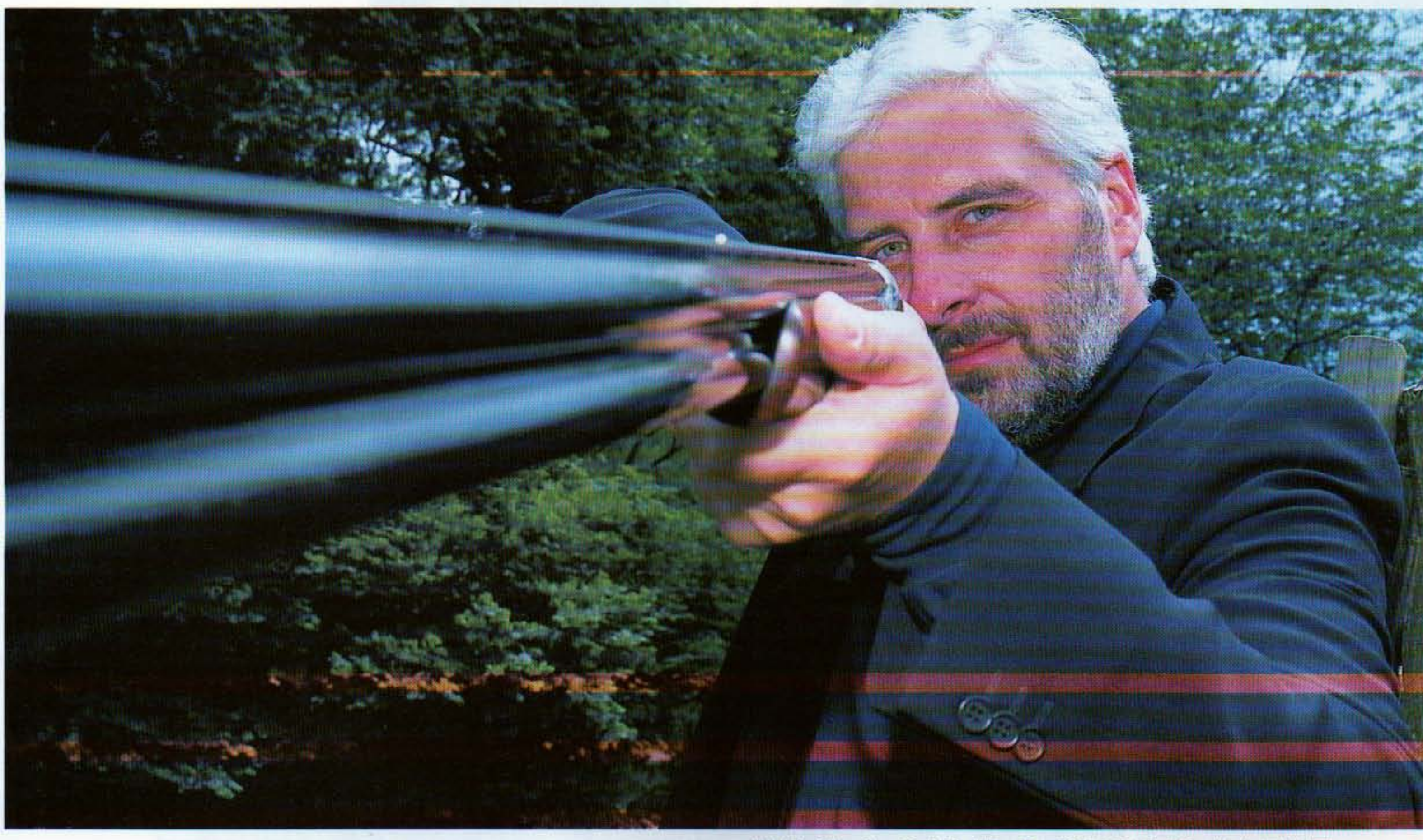
have a much better feel than we do. The way they sequence events makes it feel more like an interactive experience rather than just a game where you have to get from point A to point B.

Edge: Do you think western developers can successfully borrow such approaches?

LE: I think these things are closely related to Japanese culture. One of the extraordinary trends there are the weekly comic books – 500 pages each, with the average one selling about 100,000 a week, at least. It's amazing but part of the culture is this comic book culture, with storytelling, and also anime. That isn't something that's a large part of our culture. I mean, we have Judge Dredd and whatever, but it's nothing like the same scene. Also, Square has something like 200 artists working on *Final Fantasy* – there's a bit of a difference. At the moment we just don't take what we're doing seriously enough to be competitive in the sort of field they're in. They're much better, I think, than we are at understanding what the mass market wants. I think that in the videogame industry, their consumer is different to ours – theirs is more a comic book reader than a hardcore gameplayer. I know we're moving out of that here, certainly, and I dare say it will be even more apparent with Playstation 2 coming along, but at the moment, unfortunately, our development group is still very inwardly focused – they're writing games for themselves almost. I appreciate that that's a broad generalisation, but nevertheless we have to think outside of the 'Oh, that's not the game I want to play'. I want to write the game that everybody wants to play. So we should learn from that approach. And I think some developers are focusing on more massmarket products, although they're not doing them as well as they could.

Edge: So apart from big eyes and reams of stats, what other ingredients do you think help a game transcend these perceived boundaries between cultures?

LE: I used to think that one of the things that made Bullfrog games unique were in fact very simple things – the player not being the central character, for example. That doesn't apply to all Bullfrog games, of course, but it was a strong principle, where you can walk away from the game and it carries on as if there was some form of fundamental control element at work and it wasn't you. And I think that idea, the very sophisticated AI which we used to play on quite heavily in the press but was in fact driven by a rather basic *Excel* spreadsheet-style thing, it *was* very sophisticated – it was a new thing in the games market. Now, we've gone on to 'learning' AI, where elements may actually follow patterns and understand what's going on and modify their behaviour accordingly. It's not unique to Bullfrog any more, that's for sure, but it's certainly not that widespread in games. I think with the whole God thing, everybody really wants



to be a megalomaniac. I've always wanted to. We talked earlier on about the sequelisation of things, but I think that's one of Bullfrog's underexploited areas. I think it could really capitalise on the *Theme Park* idea – there are loads of *Theme* ideas that you could do. Yes, they would be sequels, and they would follow a basic principle, but I've always wanted to fiddle around with things that were out of my reach in real terms: I can't build cities – although I am actually tempted at the moment [laughs]. You can't do that sort of stuff, but you can in a videogame and see the cause and effect, which I think most people find fascinating.

At Bullfrog, we never used to try to think about being able to do a better game than something already out there, it was a case of thinking about making a game we would really like to *play*, and that used to be good enough to make the difference. I don't think it is now, I think you need to think about what sort of game other people would really like to play. I'm not sure that Bullfrog's actually made that jump yet.

Edge: So how do you find out what sort of games the public wants, as opposed to the games Bullfrog staff want to play? Do you send a bunch of market research guys out?

LE: I suppose there's an element of that, although I think the issue there is that we don't actually employ people who make up our target audience. We don't employ many females in development, and we certainly don't employ the older age group in development roles. Our staff are the sources of information behind the more hardcore games, so I think opening up development to more massmarket people would be a real achievement, because we're still in the realms of this twitch mentality, with young males playing these games. There's nothing wrong with that, of course, but if you want to write the games that I'm talking about – and I do – then you need to take steps to do it. With all due respect to EA, it's very easy to write a sports game. EA could probably get rid of all their original title development, get rid of Maxis, get rid of Westwood, get rid of Bullfrog, and put all the money into sports games and make more money than they do now, but they don't actually want to do that. One of the reasons is that they don't like playing for licences. That may sound cynical, but it's true – EA would rather control their own destiny. To be honest with you, I don't have a really good feel for the answer on how you change from where Britsoft currently is with its game design to perhaps where I think we should be. Historically, one of the problems has been the fact that we rely heavily on a programmer to design a game because he knows the limitations of the machine; he knows what he or his team can do, and therefore the game design tends to come from a more technical point of view than

HAVE A GAME DESIGNED IN THE UK AND THEN IMPLEMENTED IN JAPAN – OR VICE VERSA – AND HOPEFULLY CROSS BARRIERS"

anything else. That's changing within the likes of EA. You're getting producers who understand about film production – the qualities and requirements for entertainment rather than the technical aspects of it. And it's going to get better as we move further away from technical limitations – I heard somebody refer to PlayStation 2 as the first game platform designed with emotion as one of its basic tools.

Edge: Don't you see that as marketing hype?

LE: Of course, yes. But the good news is that I like the way they're thinking about it. I think that that's absolutely right, they should be thinking about it in terms of emotion. What makes a movie great is the emotion. Well, there are lots of other things, of course, but what makes it unique is how it controls people's emotions. I think it is a bit of marketing hype, but it is a sign that Sony obviously wants it to be a massmarket machine. The first PlayStation kind of is, but it isn't. With PlayStation 2 Sony seems to be determined to make it very mass market, moving it more towards mums and dads in the living room.



Net profits

Edge: What can you reveal about your forthcoming Internet venture?

LE: Obviously everybody's looking at the Internet for some solution, they're looking for somebody to come out and save them from whatever their fears are at the moment – failing sales or whatever. I'm looking at the Internet because I think of it as another dimension to entertain. If you talk to major publishers, most of them are looking at it from either playing games online – the same games, except modified slightly for the Internet – or delivering content. These are obviously pretty sensible things to be thinking about, but I think there's another complete dimension there. There's a shareware game which revolves around acronyms, I think it's called *Acrophobia* or something like that, and it's a very simple online game, including a chat feature. Despite being so simple, though, stacks and stacks of people are playing it – two of the Bullfrog guys were telling me what a great game it was the other night, in fact. And I always think that's a great measure – it's a very simple game, it's Scrabble online or whatever, and yet you've got these hardened gamers, one being one of the earliest employees of Bullfrog... I thought, well, if *he's* playing it... That's the sort of entertainment experience I want to get into. It doesn't have to be the most technically difficult thing to put online. Yes, it must still move fast enough to be impressive to me, it just has to be a niche experience. I wish I'd dreamt up Scrabble or *Tetris* or something like that.

Edge: Can you be any more specific about the avenues you plan to explore with your vision of Internet gaming?

LE: Playing the games that we play now, only in online form, I don't find particularly interesting. I think the Internet offers more opportunity than just that. Chatting online, interacting with other people – there's the entertainment aspect, not necessarily the complexity of the game. This means that you have to think differently about how you write the product. You have to think differently than a lot of companies are with their Internet games. My particular interest is, obviously, coming from a game background, writing games in the traditional sense, but rather than make money by selling games for £50 or even £30 and then adding some Internet component, I've been looking at delivering a much lower-cost base price for the game. I firmly believe that all games should be below £14.99 if you really believe you want to get to your mass market audience, anyway – you really should be down to the price of a music CD. Ideally, I'd give the base product away for free, but I don't think that the model exists for that yet, so let's just say you make it very cheap – £9.99, £5.99, something in that order – and then sell add-on bits via the Internet. If the game's good enough, people will want to play it, if it's not then you should have done better when you made it. Too often now people spend £50, play for an hour until they get frustrated and then throw it away, and I think that's ridiculous. My kids do it. My idea is that it could be a more persistent thing that you can add to. You'd expand the experience so we don't have to keep re-inventing the core game – it stays the same. It might be a bit like *Sim City* where you're able to buy more buildings, or you might be able to buy better AI for your people, or you might be able to send them off and educate them. You'd pay small amounts of money to make that happen – not very much, maybe 50p or less, because people don't have any problem with paying 50p or less. I believe that's potentially a much better business model than the other way, where every new release is £50. So there are two aspects: there's how you make money on the Net – I believe it's in small payments – and what sort of gaming-oriented experience there is on the Net – does it *need* to be on the Net? I think it needs to be far more simple and less hardcore than it currently is. I don't believe it's *Quake*. Yes, *Quake* works, and yes, you can make money from doing similar games on the Net, but ultimately I don't think that's going to be the future of online gaming.

Selling sins

Edge: Moving on to a different topic, what do you think of the anti-videogaming movement, and the Kentucky lawsuit?

LE: I think we're pretty lucky that we've managed to fend off more of this bad publicity because as an industry we're not very good at it. I have to qualify this by saying I'm not necessarily pro-



"THERE'S NOTHING NEW ABOUT THE FACT THAT IF YOU GET AN '18' RATING IN GERMANY YOU SUDDENLY SELL TWICE AS MANY GAMES, BECAUSE THAT'S HUMAN NATURE. AND THE INDUSTRY HAS ALWAYS TRIED TO ENCOURAGE THAT IN A WAY, BECAUSE IT'S REBELLIOUS"



or anti-violence in videogames, but it's pretty obvious when you see what's going on in the movie industry, it's clear that people are going to come down like a ton of bricks on anything you do and that all these lobbyists are just looking for something new to latch on to. We haven't been very good at policing our own side, so the 'Nintendo killed my son' things have happened.

Edge: But hasn't the industry gone out to court that kind of publicity?

LE: Partly. Well, there's nothing new about the fact that if you get an '18' rating in Germany you suddenly sell twice as many games, because that's human nature. And the industry has always tried to encourage that in a way because it's a sort of rebellious thing to do, certainly from the developer's point of view. Without banging their drum too much, I think EA try to be as squeaky clean as they can – you very rarely see any nudity or extreme violence as it would be defined in our terms. A long time ago – I think it was when the 3DO first came out, when we saw some of the graphics that were possible on the consoles of the future – I said that as soon as the graphics start to look real you've got problems.

Edge: The lawsuit cited *Dungeon Keeper*, a Bullfrog title. What do you think about that?

LE: Did it really? I didn't know that. Well, that's excellent, we'll sell *loads* [laughs]. It's true.

Edge: But how do you feel about being in part responsible for delivering what these allegations say is changing people's lives detrimentally?

LE: I do think that it is extreme, to be honest with you. Of course it's having an effect on people's lives. Every experience in your life has an effect on you in some way or other, subliminally or otherwise, but I'm not convinced that something like *Dungeon Keeper*, particularly, which is very much tongue in cheek...

Edge: That's always the defence, though, isn't it? That's it's all very tongue in cheek and it's 'fun'.

LE: You've got a seven-foot red bloke, with two big horns sticking out like that – a completely unfeasible character. In many ways it's only the visual realisation of many books that are out there, and dealing with fantasy worlds, so I would say no in the case of *Dungeon Keeper*, not just because it's ours but because our intention was to build on the Dungeons & Dragons theme using some slightly weird Bullfrog humour. Besides, we made a conscious decision very early on, when we did *Syndicate*, not to have blood and guts in the games wherever possible.

Edge: Even though *Syndicate* was overtly violent.

LE: [Pause] If you take *Theme Park* as an example, which is clearly not an overtly violent game, you do get things where if you don't maintain your rides people are thrown off, but nobody gets killed, there's no blood anywhere. There are piles of puke and stuff, but that's about as controversial as it gets.

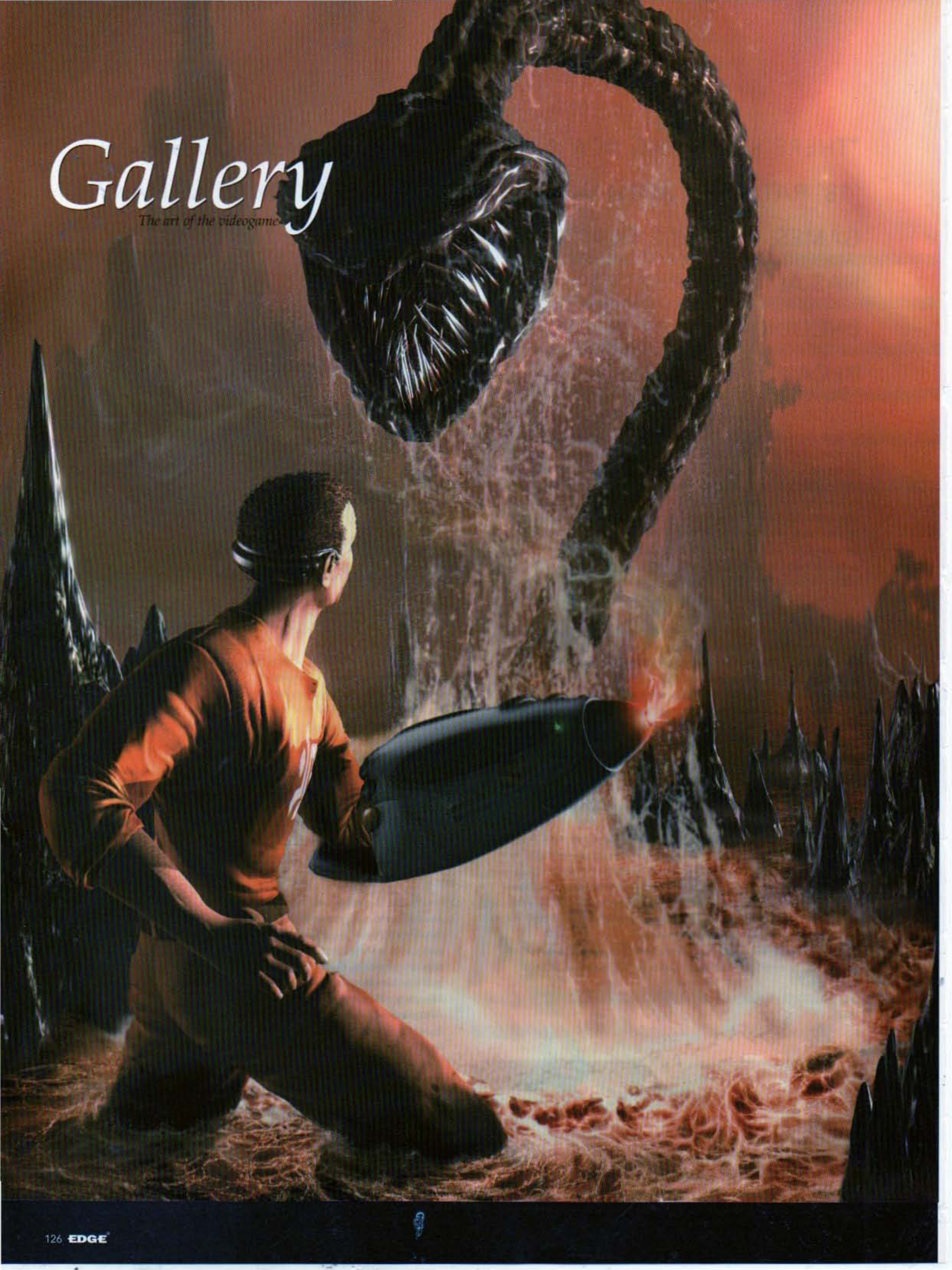


Edge: You mentioned books, too. We're talking about passive mediums by comparison to videogames, which are absolutely non-passive.

LE: That's true. But I really don't think that it holds true for *Dungeon Keeper*, it's more true of *Syndicate*. Graphic realism wasn't there, but nevertheless the acts of violence were real. Okay they were cyborgs, supposedly, or they were in Germany anyway, so I'd be more likely to agree on something like *Syndicate* than I would *Dungeon Keeper*. I think that this kind of thing will make everybody think again, but, well, the whole violence and tough guy thing, shooting things, it's part of being a young male – that's what they look for. Something will have to replace it. Okay, it may be less overtly violent but it'll have the same elements in there for the time being. Unless, of course, it all goes pear-shaped and they start clamping down on any form of violence in games, which would be a bit of a shame.

Edge: It's interesting, though, when you say your goal is to reach this super-wide mass market, because outsiders who have little experience of videogames may suddenly look from the outside in and think, hold on, this is wrong.

LE: Yeah, I wonder why they don't stop selling guns in toy shops, because it doesn't get much more interactive than that: a son holding a real-looking gun, shooting his dad. It's more real than a videogame because you're actually living the experience in 3D. The trouble with these things is that it gets a little bit of meat on it somewhere, and somebody gets hold of it and it gets blown out of all proportion. But I shouldn't really comment on this stuff because I'm a completely warped individual who probably played too much *Speedball* or something [chuckles].


Gallery
The art of the videogame





Right from the outset, *Outcast* has been an ambitious project. When **Edge** investigated Belgian developer Appeal's progress a year ago, the scale and size of the environments could not fail to impress. Now complete (see p78), added options, such as using a pair of binoculars ingame to magnify the scenery, work to great effect – you really can see for what seems like miles. And while the cinematography is often breathtaking, the artificial intelligence system (GAIA) that controls the game's eco system determines the richly populated landscapes, where temples, forests, and 65 interactive characters exist. The figures featured in these gloriously lit images comprise some 80,000 polys.

Images rendered by artists at **Animare Studio**, France, using *Softimage* on an SGI workstation, plus *Photoshop*


V-RALLY
15



This rather menacing main render of the new Peugeot 206 World Rally Car – contesting a limited amount of events this season – is part of an impressive collection of images accompanying Infogrames' suitably accomplished *V-Rally* sequel (see p82). Somewhat smaller but also on this page (and no doubt a familiar sight to Colin McRae and fans), is an equally faithfully reproduced Subaru Impreza WRC (expertly driven this year by Richard Burns, recent Acropolis Rally winner).

Richard Scott, **Simon Auchterlonie**, **Andrew Bradbury**, **Colin Gunn** and **Lizzie McKie** produced this imagery for Infogrames UK using *Lightwave 3D*

TEKKEN TAG TOURNAMENT

FINDING ITSELF CORNERED, TEKKEN FIGHTS BACK WITH ELEMENTS BORROWED FROM RIVALS

Developer: **Namco**
Release: **Out now (Japan)**
Origin: **Japan**



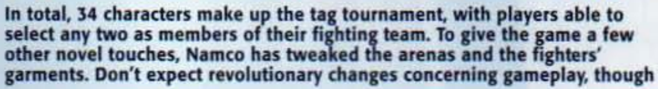












In total, 34 characters make up the tag tournament, with players able to select any two as members of their fighting team. To give the game a few other novel touches, Namco has tweaked the arenas and the fighters' garments. Don't expect revolutionary changes concerning gameplay, though



Fans of Capcom's fighting series will be all too familiar with the tag concept introduced for this latest *Tekken* coin-op interpretation

The beat 'em up market is becoming something of an enigma. The sheer saturation of titles combined with the relative poverty of new ideas would seem to point towards a genre in crisis, but the games just keep arriving, even though the distinctions between them are becoming ever more blurred.

Such is the case with Namco's long-awaited fourth title in the legendary *Tekken* series. *Tekken Tag Tournament* is not *Tekken 4*, though – it's an improved version of number three, in a similar vein to Sega's *VF3tb*. The character textures have been sharpened up, there are several new fighters among the 34 on offer, there's a new game mode, and although the background arenas are the same, they've been given a visual overhaul: some now take place at a different time of day than they did in *T3*, to give a different mood. Gamers familiar with the third *Tekken* game shouldn't have too much of a problem recognising this.

The big news, then, is the addition of the tag-team element, no doubt inspired by Capcom's *X-Men Vs Street Fighter*. Players select two characters instead of one and can switch between them at any point during a fight. Namco has added an extra tactical feature here – if you perform the right combo you can push the other player's fighter off the screen, thereby forcing a tag. As the game is over if the energy gauge of one of the two fighters reaches zero, you can use this move to force the weaker combatant out, so bringing victory closer.

Tekken Tag Tournament seems to be pushing the System 12 board to its limits, which is probably the point. Perhaps this is a final reminder of how good the game series is, and how effective console-based arcade hardware can be, before Namco announces a new board based on NGPS architecture and, perhaps, *Tekken 4*. It seems likely.



The *Tekken* games have now probably surpassed the *Virtua Fighter* series for popularity in Japan. Response to *TTT* has therefore been positive

BRAVE FIRE FIGHTERS

SEGA UNVEILS A REFRESHINGLY INVENTIVE ADDITION TO THE PERIPHERAL-FUELLED COIN-OP WORLD

Developer: **AM1**
Release: **TBA**
Origin: **Japan**

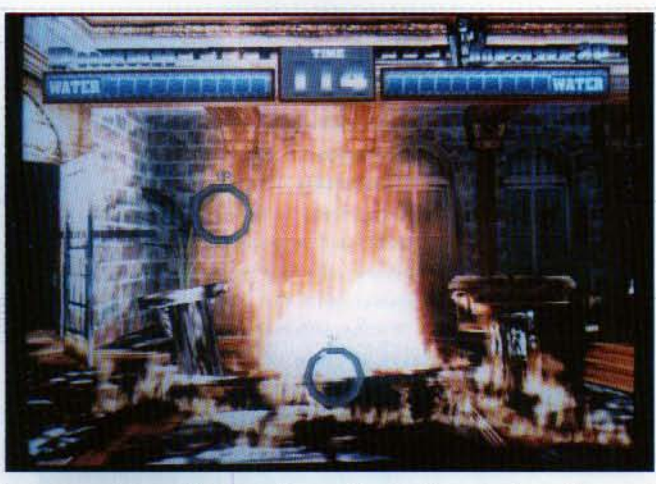


Absolutely, positively, unquestionably the strangest piece of gaming hardware to grace an arcade. You simply cannot help but admire Sega's audacity

The novelty cabinet market is surely reaching breaking point in Japan. Arcades are full to the brim with classics like *Final Furlong* and *Top Skater*, but newcomers like *Silent Scope* and *Guitar Freaks* are also fighting for space. This means developers are having to find ever more inventive games and interfaces to tempt thrill-seeking gamers.

AM1 may therefore have created something interesting enough to earn floorspace in these crowded times. *Brave Fire Fighters* is essentially a unique variation on the *Virtua Cop* theme, using hoses to put out fires instead of guns to shoot bad guys. The twoplayer cabinet features a duo of heavy nozzle controllers – players use one hand to control the direction of the water flow and the other to control the water pressure.

You face a variety of fires to do battle with, each requiring different tactics. As in *House of the Dead et al*, where you hit the fire dictates how quickly it dies: aiming for the base of the flames is the surest tactic. Water-pressure control is also vital – if the fire is close you can get by with a dribble, but distant flames will need a full blast that saps the pressure gauge.



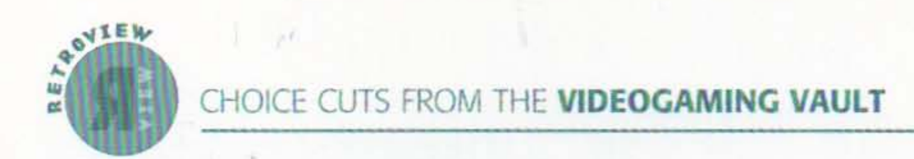
In the tradition of lightgun coin-ops, the effectiveness of your fire extinguishing is entirely dependent on where you point your light-hose

Given the violence-free nature of the game, it will be interesting to see how well it fares against its more visceral brethren. Sega may well find that gamers would have preferred a water cannon and a street full of rioters than a fireman's hose and a burning wicker chair. What a prospect that'd be.





In order to add a little variety, be prepared to face many different types of fire, requiring appropriate fire-fighting strategy, in a selection of locations dreamed up by Sega's AM1



OUTRUN

As Yu Suzuki oversees the team working on Sega's most ambitious driving game to date (see p48), Edge looks back at one of the company's most cherished examples. Scaled sprites and cabinet hydraulics rarely mixed to this effect…

Was there an era better than the '80s for coin-op gaming? Surely not. From the middle to the end of the decade new titles turned up at arcades almost by the week. But it wasn't the regular appearance of new cabinets that made it such a magical time, it was the evolving technology that drove them – and not just the technology driving the screen: Sega's endeavours to make coin-ops more physically involving, beginning with its lean-controlled *Hang-On*, blossomed with the hydraulics-laden *OutRun*, one of gaming's all-time greats.

In its deluxe incarnation, there was nothing to match AM2's driving game: its cabinet leaned away from the direction you attempted to point your Ferrari-esque car, while the steering wheel shuddered in your hands should you happen across a hazard (a regular occurrence).

If it felt great, though, it looked even better. Making exquisite use of Sega's sprite-scaling technology (refined since its appearance in *Hang-On*), AM2 threw steaming great trucks, spindly windmills and rocky cliff sides at the player. Such was the visual impact of *OutRun*, in fact, that the task in hand – passing through five stages towards the finish line within a tight time limit – was hampered simply because you were distracted by what was going on around you. In its day, nothing else came close.

OutRun's soundtrack was equally stirring; choosing from three tracks (Splash Wave, Passing Breeze and everybody's favourite Magical Sound Shower) on your in-car stereo was surely one of gaming's finest moments.

Today, any amount of fast-moving polygons struggle to generate the adrenaline rush of an *OutRun* session. Yes, it really was *that* good.









(Above) How many other driving games put an irritating female passenger next to you? Sega's game was rammed with innovations and memorable moments, not least being the first time you took a left at the first junction and entered a breathtaking stone 'tunnel' (top)







Manufacturer: Sega | 1986 | Developer: In-house (AM2) | Coin-op

EDGE VIEW

The videogame world never stands still, riding the breaking wave of advancing technology. In this regular column Edge puts the industry's progress in perspective with a look at yesteryear's headlines: five years ago this month



Edge issue 11, August 1994



***FX Fighter*, for NEC's 32bit FX console, offered 'astonishing shaded polygons', apparently**

Some five months prior to the machine's Japanese release, **Edge** delivered a nine-page special devoted to Sony's much-anticipated PlayStation, wondering 'if this could be the start of something *really* big'. Games featured included *Gran Turismo* creator Polyphony Digital's *Polypoly Circus GP* (eventually released as *Motor Toon GP*), shoot 'em up *Ora-194* (*Philosoma*) and RPG *Arc the Red* (*Arc the Lad*).

A 1994 Tokyo Toy Show report demanded the lion's share of issue 11's news pages, with Sega's Saturn demos providing the biggest bang. Expectations for a glimpse of *Daytona USA* were high, and Sega obliged with a simple car-and-flat-surface demo rather low on 'wow' factor. The *Clockwork Knight* demo received **Edge**'s vote for most appealing title on Sega's stand, but that was against slim competition. On the other side of the hall, Namco was already busy winning converts to Sony by cheekily displaying its *Ridge Racer* title in its coin-op guise.

A look at NEC's new Japan-only console, the 32bit FX, and a feature pondering the early demise of Philips' CD-i stood out as other highlights in this now-rare issue of **Edge**.









Edge's first PlayStation showcase (top left) and one of the machine's first games, *Motor Toon GP* (above left). News of Saturn's progress (top right) and a ten per cent-complete *Virtua Fighter* (above right)

Did they really say that?

"It could do [Namco's coin-op] *Galaxian³* without breaking into a sweat, and without disc access" – a rather deluded anonymous source talking about the PlayStation's power

Did Edge really say that?

'Perhaps in years to come we'll see the PlayStation evolve into a multimedia station with a multitude of uses and all manner of peripherals.' Or perhaps it'll be just another games console

Testscreens (and ratings)

Theme Park (PC; 8/10), *Super Sidekicks 2* (Neo-Geo; 8/10), *Wildtrax* (SFC; 9/10), *Doctor Hauzer* (3DO; 7/10), *Out of this World* (3DO; 6/10), *Battlecorps* (MCD; 6/10)

PIXEL PERFECT

Every gamer has occasional moments of sparkling excitement, be it the first time *Speedball* booted up, or completing *Sabrewulf*. Here, DMA Design's Gary Penn remembers a favourite digital toy set of old in the form of *Super Mario Bros*

"It was 1985, and there was a growing buzz about a new Japanese console: the Famicom. Andrew Wright at Activision somehow managed to get hold of a system – plus a copy of *Super Mario Bros*, so a few of us ended up spending a long weekend dossing at Activision's office, utterly enamoured by the exquisite infusion of audio, video, style, content, production values and a sincere sense of fun that was *Super Mario Bros*.

The bright, cheery, robust and versatile toy set – in particular the Mario toy; the exploitation of that toy set and the traditional platform formula – so inventive, considered, elaborate and balanced; all the right feedback in all the right places; the wealth of special and hidden features: quirky secondary and tertiary tasks, short-cuts, secret rooms... Here was a game – a collection of games, in fact – made for everyone. Everything for the home systems that had come before was now small and crude by comparison.

Two years later Gary Liddon and I started building a precision rendition of *Super Mario Bros* for the Commodore 64. A simplified but authentic and playable version of a level had a leading publisher impressed enough to attempt to acquire the rights to produce an official conversion. Sadly (predictably, with hindsight) Nintendo was not impressed and insisted that we desist and destroy all work to date."







The irrepressibly addictive charms of *Super Mario Bros* may in part account for Gary Penn's, er, distinctive demeanour some 14 years on...



Philips Silver Shadow 32PW9544 TV, VR807 VCR and DVD935 DVD Player

■ *£2,280 ■ Contact: 0181 665 6350



Gone are the days when you'd be chuffed to pieces with a 21-inch telly, smartly encased in a rather lovely imitation wood facade. Now everything is curvier, shinier and sexy enough to stop your heart every time your gaze falls upon it.

Enter Philips' Silver Shadow setup, a great-looking 32-inch widescreen TV with matching VCR and DVD player. Also available in blue, the unit offers a 100Hz digital scan to eliminate flicker, splitscreen Teletext and auto-setup, so you don't have to sit for hours tuning the blessed thing in, TV guide in hand. With picture quality as sharp and vibrant as this, it's just a shame that the sound doesn't match, lacking, as it does, any depth and subtlety.

Of the bundled accessories, the video is remarkably good, with VideoPlus+, satellite decoder control and the ability to play NTSC tapes. But in these days of digital dash, no matter how many gimmicks are packed in, the video format still looks redundant. What a shame, then, that the plasticky DVD player doesn't make up for the VCR's shortcomings. With erratic playback and unconvincing colours, the high-style factor in no way compensates for a substandard machine.

Monsoon PC Speakers

■ *£199 ■ Contact: 01923 699399

You may have a sound system to die for in your living room, but chances are that settled around your computer are a set of speakers with more snap, crackle and pop than a popular brand of breakfast cereal. To combat this common problem, Boston has unveiled the Monsoon PC Speaker system which comprises an active sub and two flat-panel speakers.

Simply connect the subwoofer to your computer, plug in the two speakers, and you're ready to go. While you should remember that these are multimedia speakers, and therefore can't touch the quality of your hi-fi, the Monsoon sounds great, handling most CDs with more than adequate finesse, although it's better suited to pop and dance than the classics. It's when gaming, however, that this system comes into its own: crank up the bass and your guts will rumble with every explosion.



* These are typical High Street prices, accurate at time of going to press. Manufacturers are no longer obliged to provide recommended retail prices on certain consumer electronics products.

BT Easicom 1000 Phone

■ *£180 ■ Contact: 0800 800150

In the old days, after mankind had discarded the two-tin-cans-joined-by-a-length-of-string setup, all we had to keep in touch with friends and relations was the humble telephone. Time moved on, however, and soon the fax machine reared its head, followed swiftly by email. While it may well be good to talk, many people are put off with exploring anything other than the good old dog and bone, simply because they don't want huge pieces of equipment and hulking great computers clogging up their halls.

Something short of £200, however, now buys you the BT Easicom 1000 – a phone, fax and email machine all wrapped up in one pretty sturdy package. Use your own email account, as long as your ISP has a direct dial POP3 number, or use any of the five accounts BT offers you when you buy the phone, and you'll be cyber-chatting before you can say 'it's for you-hoo'. On the downside, sending an email will set you back 25 pence per minute and you can't receive or send attachments or graphics. Yet...

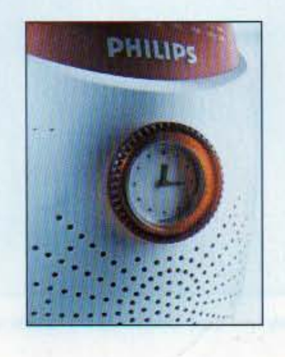


Philips AE2170 Portable Radio

■ *£30 ■ Contact: 0181 665 6350

Step in the shower, turn on the water and all of a sudden you think you're the next Elvis/James Dean Bradfield/Billy Bragg, singing your heart out – much to the distress of anyone within earshot of the bathroom. If only you had a proper backing tape, eh? Well, with Philips' new splash-resistant radio you could soon squeeze All Saints, Britney or, heaven forbid, Chris Evans into the cubicle with you.

The design is a bit on the unusual side, with its Fisher Price-like bright orange-and-white livery, but the reception of both FM and MW bands is surprisingly good, able to pump out enough decibels with little interference from the running water. Watertight laminated buttons dispel the chance of frying yourself every time you want to change channels, and the chunky plastic will survive being knocked about. The only gripe is the surprisingly flimsy battery panel, which has an irritating habit of popping off. Not the kind of thing you want happening when your eyes are full of Wash 'n' Go.





Edge has attempted to state prices wherever possible, but for up-to-the-minute information, check adverts in the national press or contact your local consumer electronics dealer.





A new way to fly

Japan: Anything that Microsoft attempts, ASCII's ergonomics lab tries to do – only flashier. Its latest futuristic peripheral is the Mission Stick, designed for Dreamcast flight sims *Aero Dancing* and *Airforce Delta*.

And if it looks a little strange – unlike a traditional joystick you have to change the orientation of your hand by 90 degrees – there are enough buttons here to please even the most obsessive flyboys.

ASCII Mission Stick out now in Japan: ¥7,600 (£40)



The aisles have it



Sweden: Advertising in games is nothing new – think Red Bull and *Wipeout*, for instance. But financing an entire game with advertising seems to be an extreme solution to the cashflow problems faced by developers. Not for AddGames of Stockholm, though. It's released *Mall Maniacs*, a virtual 'Supermarket Sweep', in which retailers paid around £10,000 for the privilege of having their products featured ingame.

AddGames' distribution tactic is also novel – 100,000 copies are being given away with Big Mac meals. While the golden arches appear prominently in the game, though, McDonald's wasn't charged a dime. And, like all good developers, the sequel, a truck-based delivery sim, is already in production.



Exactly how much Buddha paid to appear in *Mall Maniacs* is a closely guarded secret

Simply the best

US: Hosted by Ultimate Gaming Online (www.ugo.com), editors of 32 American gaming mags and Websites were asked to wrap up their E3 coverage by voting for the titles on display that most impressed. The results are:

Best game of show:
Freelancer (PC, Digital Anvil)
Best game (PC):
Freelancer (Digital Anvil)
Best game (console):
Perfect Dark (N64, Rare)
Best original game:
Black and White (PC, Lionhead)
Best action game:
Team Fortress II (PC, Valve)
Best platformer:
Donkey Kong 64 (N64, Rare)
Best fighting game:
Soul Calibur (DC, Namco)
Best racing game:
Driver (PS/PC, Reflections)
Best strategy game:
Homeworld (PC, Relic)
Best action/adventure game:
Oni (PC, Bungie)
Best RPG vampire game:
The Masquerade – Redemption (PC, Activision)
Best online multiplayer game:
Team Fortress II (PC, Valve)





Truly mad about the Boy

UK: At the risk of sounding old, when **Edge**'s staff were at school the only thing to 'customise' were pencil cases and holdalls. Today, the situation is somewhat different. Now, such is the ubiquity of Game Boy that even 'Blue Peter' has probably set about making one using sticky-backed plastic.

Mindful of the fact, Nintendo commissioned a selection of contemporary hipsters to get artistic on its favourite money-spinner – although this time it's for charity. Bids are therefore being taken online for each of the Game Boy Color designs (see **www.dancesite.com/nintendo**), and current favourite is drum'n'bass badboy Goldie's effort, with an offer of £200. The site is open to bids until July 24, although the finished articles are something of a mixed bag. Pete Fowler, perhaps best known for design work with Welsh band Super Furry Animals, decided to capture some eyeballs, while metal-toothed Goldie's effort looks to have taken him all of five minutes. Industrial designer Pablo Chappell is more ironic in his approach, however – as most people are already metaphorically handcuffed to their GBCs, his chopper-style wing mirrors could prove a boon for checking if your boss is coming.

Of course, **Edge** thinks you can do better, so send in your own design and, courtesy of Nintendo, we'll send the winner a GBC to soup up in the desired style. The **Edge** champion will then be sent to the 'National Customise a GBC' final (which is probably going to be held in London in October) where it will obviously win. Nintendo will then take your creation and produce a limited-edition run of the design for Christmas.

Mark your entry 'GBC' and send a single sheet of A4 to ***Edge****, 30 Monmouth Street, Bath, BA1 2BW; or digitally compressed files (under 2Mb please) to edge@futurenet.co.uk. The closing date is September 1. Usual rules apply.*

Designer Game Boy Colors from top to bottom: Pete Fowler, Goldie (left), Stash (centre), Futura (right), Noki, Inflate, and two from designer Pablo Chappell



The event that time forgot

UK: It is fitting, considering the hyper-accelerated growth rate of the videogame industry, that the earliest consoles – commomly a mere 20 years old – are now considered collectable antiques. At least by a small but committed minority. Recently, the second ever Britmeet event, a get-together for classic videogame fanatics, was held at the Milton Keynes Ice Hockey stadium and, of course, the hardware creating the greatest buzz was not the NGPS or PIII, but the PC Engine, the Vectrex and the most popular of them all, the Atari 2600. Walking around this event, it's as if CD-ROM never happened.

The chances are that chunks of your childhood will resurface here. Around 15 stalls groaned under the weight of hefty cartridge games, long-forgotten handhelds (*Caveman*, *Super Cobra*, a Game & Watch version of *Zelda*) and unthinkably weedy consoles. Some punters were here to sell, others were just showing off their wares, and all the while non-stall holders simply wandered around discussing rare titles (a never-released 2600 version of *Tempest* was perhaps the star of the show) and indulging in quick bursts of *Galaga '88* (the PC Engine version, natch), *War Lords* and tenplayer-*Bomberman*.

There's something kind of fetishistic about this scene. As co-organiser **Chris Foulger** explains, "My vision of the event was to mirror the computer fairs that are often held, but to focus almost exclusively on console videogames. Not just on selling old consoles, but allowing people to play them and hear the sounds, and get a feel for the controllers. I think emulation is a very sterile experience." He's not alone in this desire – although attendance was relatively low (possibly around 100 visitors), interest in retro hardware is growing. And there's certainly no shortage of cult machinery – the Saturn has now become a collectors' console, and there are no doubt healthy little scenes building around the 3DO and Neo-Geo. So will this kind of scene ever be built around the PlayStation? In about 50 years' time, maybe…

Those interested in getting involved in the UK retro scene can subscribe to the CCNUK mailing list. Email Ian Pleasance (ian@planetbuilders .co.uk) for more info. There is also a Neo Classic mailing list (part of CCNUK) which covers newer machines – contact Jon Dyton (jon@wibble.powernet.co.uk) for more details.







Above: a Vectrex complete with rare 3D goggles. An intriguing experience, even if you do look like an idiot using them



Videogames, but not as the PlayStation generation knows them. If you weren't playing on your 2600 back then, there were 'portable' thrills available. And you thought the Game Boy was bulky

DataStream



Revenue Jon Romero (pictured) predicts will be generated by the release of *Daikatana*, *Deus Ex* and *Anachronox*: **$70-$90m**
Number of games that Eidos expects to release this year: **21-25**
Proportion of those games that will be sequels: **one third**
Percentage of US CEOs surveyed who said that it takes $4m+ to create a blockbuster PC title: **12%**
Percentage of games shown at last year's E3 rumoured to have made money: **4%**
Reduction in costs of managing a bank account online compared to a normal branch account: **94%**
Rise in online sales generated by Electronics Boutique during the first quarter of 1999: **fourfold**
Number of European gamers estimated to be playing the US version of *Ultima Online*: **20,000**
Amount of delay experienced by Yu Suzuki's troubled *Shenmue* project, following its most recent release slippage: **12 weeks**
Number of violent onscreen deaths the average American will have seen by age 18: **40,000**
Percentage of consumers, according to a PC data online survey, who think that playing violent games is likely to make people behave violently: **43%**
Percentage of consumers, according to a PC data online survey, who think that parents should prohibit children from playing violent games: **31%**
Number of *Super Mario 64* units sold globally, making it the best-selling N64 game: **10.6m**
Number of units of *Zelda: Ocarina of Time* already sold: **7.1m**
Number of consumer pre-orders for Dreamcast Sega of America predicts retailers will have received by launch: **200,000**
Number of pre-orders Sony had received in the US when PlayStation launched in 1995: **100,000**
Predicted global DVD player sales in 2000: **70m**



Tetris creator thinks inside the Box

US: What do you do if your name is Alexey Pajitnov? As the inventor of *Tetris*, you've done more for Nintendo than any human being alive, with the obvious exception of Miyamoto. But does NCL reward you with a fat fellowship and a Kyoto holiday home? No, you end up working for bad Uncle Bill in Silicon Valley, Redmond instead.

But simple games still interest Pajitnov, as his latest, *Pandora's Box*, testifies. Aimed, like *Tetris*, at the mass market, it looks like a Rubic's Cube sim for the PC. Let's just hope he's sorted out his royalties this time around.



There are no falling bricks, just slices of elephant, to contend with in Alexey Pajitnov's latest game

Calling all brave hearts

Scotland: Any number of Americans have turned those wasted leisure hours in front of PC screens into hard cash thanks to the explosion of 'professional' gameplaying, but there are few similar opportunities on this side of the pond. And while Scotland's first Computer Game Championship won't make its winner rich or famous, at least it's a start.

Expertise in one of six games is required – choose from *Tekken 3*, *Half-Life*, *StarCraft*, *Microsoft Golf 99*, *Michael Owen WLS* or *Colin McRae Rally* – and the action kicks off from August 9 in Perth. *For more info visit* **www.inferno.co.uk** *or call 01738 813340.*



What Lara did next: Nell McAndrew, cover girl of the latest *Playboy*

Nude raider bares all

US: Handling a sex symbol, even a virtual one, can be a hazardous occupation, as Eidos is slowly discovering.

Following on from its 'Babes of E3' piece, *Playboy* continues its new fascination with girls and games by featuring Nell McAndrew, Lara Croft stand-in No2, on the cover of the August issue. At least it will render the copious 'Nude Raider' Websites redundant.

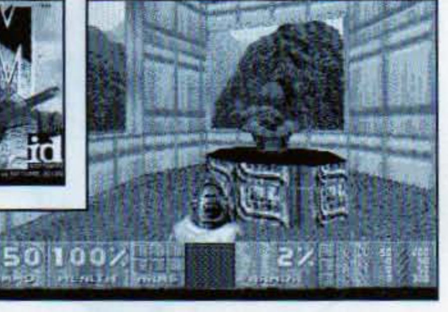
Edge also wonders how much attention is being paid to the increasing number of tie-ins. The latest edition of graphic novel *WitchBlade Featuring Tomb Raider* (left) – 'Two femme fatales with big guns and bigger attitudes' – continually refers to a certain 'Laura' Croft.

A Doom in the hand...

US: As lawsuits cut one head off, another grows in its place. The latest big hit on the emulation scene is *Doom* running on that most handy piece of hardware, the PDA. Grandly entitled *DoomCE*, it has been released by the shadowy Revolutionary Software Front, which also offers assorted re-engineered Game Boy titles. A colour version of *DoomCE* for the Palm Pilot is expected soon, too.

Check them out at **http://www.eskimo.com/~hayes/doomce.html**





DoomCE, running in all its four levels of greyscale glory on the Cassiopeia E10





Namco sends in the clone

Japan: Despite the lawsuit slapped on to Jaleco for producing *VJ*, which was claimed to be too similar to DJ simulator *Beatmania* for comfort, Namco has unveiled its own Konami-aping effort in the form of *Guitar Jam*, a coin-op that looks an almost note-for-note clone of *Guitar Freaks* – the most significant difference being that the prompts scroll horizontally across the screen rather than vertically.

In a more original vein is the company's new lightgun shooter, *Quick & Crash*. Unlike its *Point Blank* games, in this you're forced to holster your weapon at regular intervals. The cabinet subsequently measures your speed on the draw and displays the result on a prominent LED display below the main screen. A neat twist.

Both games will feature in next month's ArcadeView.

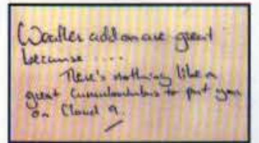


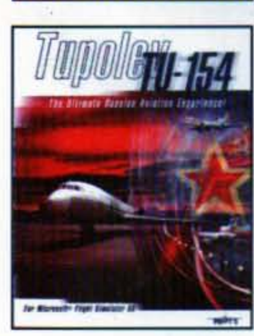
Quick & Crash may bear an innovation or two, but *Guitar Jam* could be the clone to end all clones

Reach for the skies

UK: Back in **E**72, ten add-on packs for *Microsoft's Flight Simulator* were offered to the person who could best finish the sentence: 'Weather add-ons are great because...'

Ian Tooley of Great Yarmouth scoops the lot, mainly because the trusty **Edge** dictionary had to be deployed to check the spelling of his entry.





The home of disco

Japan: They said it would never take off in Europe, and it certainly hasn't on anything like the scale it did in Japan. But at least Konami's *Dance Dance Revolution* (see p90) can now be enjoyed in the home, thanks to this dedicated floor controller. Surprisingly robust (it has so far withstood the jiggling, lumbering hooves of **Edge**'s designers), it's relatively inexpensive, too.

***Dance Dance Revolution* controller out now in Japan, priced ¥5,500 (£28)**









THE CHEMICAL BROTHERS
Surrender
(Virgin)

With the excesses of big beat behind them, Ed and Tom return for a third time. They still mean business, though, as 'Surrender' proves. It's an album shot full of affirmation – or 'music designed to trigger a response', to paraphrase the opener, co-written with Missy Elliott. The other cameo vocalists are well used, too. Mazzy Star's Hope Sandoval' seduces, Mercury Rev's 'Jonathan Donahue' gently wigs out, and Noel Gallagher has never sounded as good as he does on 'Let Forever Be'. Surrender? Definitely.



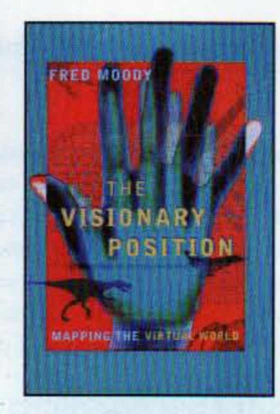
BILLY MAHONIE
The Big Dig
(Too Pure)

Who needs a vocalist nowadays? Surprisingly, the most exciting music of '99 has come from instrumental bands. Billy Mahonie's brand of music is muscular, but that doesn't stop its debut album continuing the trend. Drawing heavily from the Tortoise school of post-rock, it contains moments of sheer beauty. Some tracks could even be described as delicate, although the titles rarely are: cue 'Watching People Speaking When You Can't Hear What They Are Saying'.



THE BETA BAND
The Beta Band
(Regal)

The only thing The Beta Band won't do is take themselves seriously. Apart from that, then, they'll consider anything once. Apparently, they think this is one of the worst albums of the year, but few people will agree. Bizarre it may be, but never boring. Ever heard a song based around how a band got their record deal? Well, listen to 'The Beat Band Rap'. And while in places they become indulgent, this hopeful mix of everything and the kitchen sink retains an unusual charm.



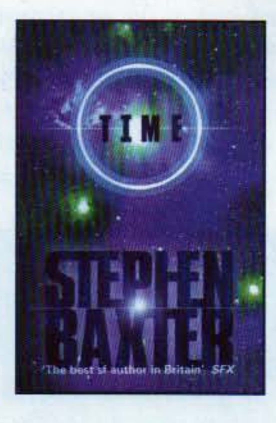
Author: **Fred Moody**
Publisher: **Allen Lane**
ISBN: **0 713 99301 4**

THE VISIONARY POSITION

Virtual reality is a story that happened before its time: of millions of dollars lost, of visions shattered, of pain and gain. If it was about love it'd be a Shakespearean tragedy – or so Fred Moody paints the world of his hero, Tom Furness. Like Michael Wolff's *Burn Rate*, *The Visionary Position* is about the folly of a business that over-stretched itself and promised more than it could ever deliver. But unlike *Burn Rate*, this was no cavalier jaunt into the ridiculous world of IPO speculation.

Tom Furness is an inventor, a dreamer, and according to Moody, a visionary. In 1966, 23 years before the term virtual reality was coined, Furness was working on his first 'virtual world interface'. By 1989 he'd set up the Human Interface Technology laboratory in Seattle, and just eight years later they pulled the plug.

Moody experienced the explosion of inventions and tempers at the labs; he listened while Soundgarden was played loudly, providing cover for the secret meetings where finances were cut; and he watched as investors pushed engineers into impossible positions. It's gripping stuff, and if the American dream is of visionaries battling for their ideas against impossible financial odds, Moody is its champion. But he never answers the conundrum at the heart of the story. Does the dream drive technology or does technology drive the dream?



Author: **Stephen Baxter**
Publisher: **Voyager**
ISBN: **0 00 225768 8**

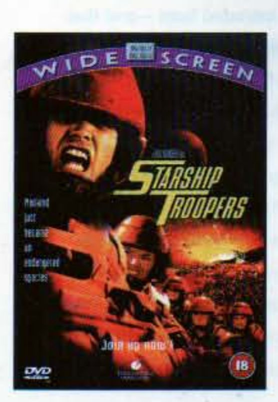
TIME

The two things that Stephen Baxter needs are a new cover designer and a sexy pseudonym. With those marketing ploys he would take his place as one of the world's foremost sci-fi authors. Because when it comes down to writing prowess, he's got it all. In *Time* he manages to take the most esoteric cosmological ideas and mesh them into a fast-paced novel that should be sold alongside Jackie Collins at airports. Black holes; superstring theory; the heat death of the universe – he wraps them all together and makes them accessible.

Sprinkled with the angst of millennial tension, *Time* is based on the probability that the earth is likely to end in a cataclysmic disaster in the next 200 years. Reid Malenfant, failed NASA astronaut, decides the only option is to force the odds and start a privately funded space campaign. It's only when the mysterious Cornelius Taine of Eschatology Inc starts to receive messages from what he believes are future generations of humans that the Malenfant's mission takes on a new significance.

More than just sci-fi, this is about the biggest issue of all, the future of mankind and the reason for our existence. It's not just about the next thousand years, but the next million years. And beneath the storyline, you get the feeling that Baxter is deadly serious.

Probably the most thought-provoking writing you'll read this year, it's time for Baxter to take his place alongside Asimov and Heinlein.



DVD: STARSHIP TROOPERS
(Warner Home Video) £16

It's difficult to decide whether this is a satirical look at American society or a cleverly cloaked right-wing propaganda campaign complete with significant fascist overtones. You never know with Paul Verhoeven at the helm.

Assuming it's the former, there are plenty of amusing moments (made more gratifying with the knowledge that the message will have been invariably lost on US audiences) as the human race finds itself drawn into an intergalactic war with thousands of 30ft-tall alien bugs. It's silly stuff, but the copious amounts of CGI (a necessity for the numerous bug-infested sequences), combined with the dynamism present in the frantic battle scenes, prove compelling viewing.

Image quality shines, too. It's not the most detailed anamorphic 1.85:1 transfer **Edge** has seen, perhaps, but the outer-space sequences are particularly clean and crisp. Elsewhere, visuals are a little more colourful, with tones appealingly maintained and reproduced with aplomb.

The only real niggles can be levelled at the lack of extras on offer – particularly as last year's Region 1 US release boasted so many such additions – and the need to flip the disc halfway through the action, this being a single-layer pressing.



VIEWPOINT

EXPRESS YOURSELF IN **EDGE** – WRITE TO: LETTERS, **EDGE**, 30 MONMOUTH STREET, BATH, BA1 2BW (email: edge@futurenet.co.uk)

I am not going to say that you have taken great pleasure in slagging off Sony, Sega or Nintendo in recent issues, but why are you not so concerned about the future of the PC as a games machine?

When you consider that even Dreamcast, as an example, is offering a cheaper alternative to the PC, there has to be huge question marks hanging over its future. Okay, I know PC owners will tell you that their machine is technically superior and will be more powerful than the new consoles, but in the eyes of the consumer does this really matter?

You say that the industry needs to be educated, but so do game journalists. It is a well-known fact that PC game sales are at an all-time low. Why is this? Is it going down the same road as the Amiga?

Nobody would deny that the PC is going to be around for a long time, but maybe you could write a special feature about the future of the PC as a games platform. Or is **Edge** going to turn a blind eye?

David Reid, Glasgow

The Amiga's popularity waned largely because of the unstoppable march of the PC. Until another format comes along to bother the millions of IBM clones out there, the PC will not be succeeded.

As far as PC game sales go, have you not considered the impact of piracy?

'You say that the **industry needs to be educated,** but so do game journalists. It is a well-known fact that **PC game sales** are at an **all-time low.** Why is this? Is it going down the same road as the Amiga?'

I am curious to find out why there seems to be an under-representation of black people – ie, of African, West Indian descent, etc – in the worldwide videogame industry. I myself come from a West Indian background, and hope to secure a position within this exciting industry in the next few years, possibly as a 3D game artist or designer (hopefully with Rare!). I thought I would ask this question as from all the pictures I have seen of development teams around the world in various publications, including **Edge**, I can only recall seeing a handful of black staff members. I find this amazing, as I personally know huge amounts of black people who are hardcore gamers, and would love to get into the industry. Obviously you have to have relevant talent or qualifications, but I feel the topic goes deeper than this.

I'm not intending to spark a huge racial debate, but maybe other readers might like to write in with their views.

Tris Browne, via email

Many debates are sparked from the controversy caused by piracy, but what has not been mentioned thus far is how you actually feel when a friend or colleague tells you they have pirated the software you've just bought. I am an import gamer myself – I pay up to £55 for a good Dreamcast/Nintendo game and slightly less for a PlayStation game. I would estimate that in over the years I have gathered around £10,000 worth of software and hardware going by the prices asked of me when the products were initially released.

My argument is, if Sony, Sega and Nintendo do not do anything to combat the situation I may find myself doing the same as my friends. If everyone in my street, for example, knew a way of obtaining free petrol, I'd be a mug to myself to keep buying fill-ups at £30 a throw, wouldn't I?



Richard Stringer's experience with *Um Jammer Lammy* is another tale of import woe

The fact is, I still buy originals, mostly because of the packaging and the fact that I'm a very appreciative gamer. But most people out there would rather make copies. I know the lengths some actually go to – it's almost an art in itself to these people.

I know of people who would buy a second-hand SCPH-1000 PSX for £50 more than you could buy a brand new one, then chip it and make a little money on the side doing it for others. It's almost like getting one over the company responsible for making the product.

I have gone into an import shop to buy a second-hand PlayStation, to be informed that only one was left and that it was dodgy due to a faulty, skipping CD-ROM drive. At this point the assistant happily directed me to a well-known chainstore where I could buy a brand new machine; he would swap the drives and then I could happily use the other shop's money-back guarantee policy to get a refund. Honestly, gaming is creating a new wave of criminals.

This also brings me to another sore point. Because I am an import gamer and like to play games in their intended form – and that usually does not mean waiting an extra five or six months – I have to play havoc with all the lockouts that each of the companies tries to implement into the software. Taking the PlayStation example a step further, I bought *Um Jammer Lammy* on Japanese import to find a message on my 29-inch TV screen, and only after numerous visits to the Internet did I find that I was

locked out by Sony's new anti mod-chip program. Again I am the victim.

The new millennium may be bringing newer technologies to the home, but as technology gets more complex, the minds of those who use it are getting equally as complex. From one no-win situation to another, I think it's about time the big three bit their own tongue and brought gaming to the masses, and bring down the prices to a massmarket target range.

It's almost the same situation between cannabis users and the government – until one party accepts it is able to understand the other, no progress will be made. Until that day, it will not be Sony, Sega or Nintendo that is being laughed at. It is me.

Richard Stringer, via email

Wherever there's a fast buck to be made or official practices to be circumnavigated, it'll always happen, whether it's your friend chipping other friends' PlayStation or your next-door neighbour acquiring a dodgy card for his satellite TV receiver. Bringing unit costs down – which is something Virgin Our Price has attempted with its £30 PlayStation game initiative – will affect software piracy, but it will not stamp it out.

And who can tell software companies that their games should be played outside of the market they were manufactured for? If you want to play Japanese games, the easiest solution would appear to be: buy a Japanese machine.

I was really surprised and disappointed with your magazine when I read the **Edge** View comments regarding Tao in the June edition. Suggesting that Taos had sunk without trace actually indicated that you hadn't used your usual high standards in carrying out even the most elementary research of the company. Tao is a vibrant and growing intellectual property generator which has spent the last few years putting infrastructure and real technology in place to provide a range of world-class technologies. Announcements of our relationships with major global players in the consumer and wireless markets have been coming out increasingly quickly as we have positioned Tao to become one of the key providers of software and content infrastructure for the new generation of mobile and home networks. A phone call or a look on our Website would have provided an indication of this rather than writing something which misleads your readership.

Francis Charig, via email

Edge View is a lighthearted column – the words 'jokes aside' even followed the text to which you refer. Anyway, Francis, when are we going to see *Everyone's a Wally 64*?

I am a very contented gamer. I have a handful of games that I have played to completion and enjoyed immensely. I know that it is sacrilegious to say so, but I'm quite content with the technical abilities of the hardware. I do not crave technological innovation. What concerns me is the lack of story and character development. People talk about *FFVII* having a great plot, when it was actually more fun to read the walkthrough. The abysmal American translation didn't help much either.

Anyway, I digress. What really interests me are game engines. I gather that about 70 per cent of a game's development time is taken up with the creation of the engine itself. This being the case, why don't software companies re-use the engines they have already developed to tell different stories? This doesn't seem to be happening too much in the current PlayStation market.

There are a number of engines I truly admire, including *Tomb Raider*'s, *Resident Evil*'s and *Metal Gear Solid*'s. Why are they not being re-used to tell different stories and create new experiences?

I can think of over a dozen ways to utilise these engines to make very gratifying games. I may not be a software developer, but I know how to tell a good story. The aforementioned games were just a start. Instead of revamping their engines and producing sequels, why don't software companies put some effort into improving storylines?

I know that the dreaded movie tie-in is the scourge of the software business, but so many game engines would be perfect for reproducing a number of classic stories. Just look at *GoldenEye* – crap movie, great engine, enjoyable game; the *Metal Gear Solid* engine would be perfect for a film like 'Where Eagles Dare'; the *Tomb Raider* engine could be used for anything from 'Flash Gordon' via 'Robin Hood' to 'Tarzan'; the *Resident Evil* engine could be used for a film like 'Warriors'... I think you get the picture.

I have played too many games like *Croc* and *Medievil*, where you have a crap engine and a crap storyline and you wonder why anyone bothered. Isn't it time the games industry realised that you don't have to keep reinventing the wheel? They should have licensed the *Tomb Raider* engine and instead of making *Medievil* they could have made 'The Evil Dead' parts one, two and three!

Nick Laslett, via email

Engines have been recycled for almost as long as videogames have existed, sometimes out of laziness, more often because of economics. At the heart of your argument lies a sound point, however. Too often game development is driven by a desire to 'out-*Quake Quake*'. But there is definitely a growing movement dedicated to delivering content – be that story, pure playability, whatever – over technology. Whether or not the marketing suits upstairs will follow remains open to question.

'I have played too many games where you have **a crap engine** and a **crap storyline** and you wonder why anyone bothered. Isn't it time the industry realised that you don't have to **keep reinventing the wheel?'**

I've heard all the different opinions on what has happened in the past four years with Nintendo losing its throne and Sony gaining it. We've had Sony fans argue with Sega fans, and the Nintendo fans have hung on as long as they could while the big N yet

again gave the industry almost all of the most innovative concepts, but somehow managed to lose all but a few of its key players.

And what's going to happen with the Dreamcast and PlayStation 2? And, ooh, look, there's a Dolphin in the distance – how exciting. Let's all speculate on who can claim the throne this time. Plus, to help us, there are so many more 'independent' mags out there, all with their definitive opinions on where things are at the moment, why things are the way they are, and where they may end up. So in light of this, why is it that not one person or group of people from these independent mags hasn't acted in an independent manner and had the guts to ask developers real questions like: 'Why is it that you made most of your money developing Nintendo games, yet in the four to five years of the N64's existence your company is only now creating a dated rehash of what PlayStation owners first had 15 to 18 months ago? Don't you like making money from selling games (bearing in mind that the price of silicon did fall, as Nintendo predicted) – isn't that what you do?' Obviously this question is aimed at Capcom. Or to Core and Eidos – was it really that hard to develop for the Saturn? How could that be, when Sega isn't as reserved as Nintendo? Sega had lots of time for developers and tried to encourage them to experiment with the chipset. But no, no, no. Sega gets dumped as well, and if it wasn't for Sega, only Amiga users would know about *Chuck Rock*. I'm getting very tired of this mood where every month I read in **Edge** that another breakaway group gets things going for themselves and the majority of the time they look to create games for the PlayStation or PlayStation 2. Then when interviewed they say things like 'Dreamcast... it worries me that no one seems to be developing for it'. (Er, hello, what about Namco? Without this company the PlayStation's initial software line-up would have looked *very poor*.) Or they say, 'It's an out-of-date PC and it hasn't been out a year yet. Oooh, no, the PlayStation is very exciting, it makes me come over all emotional'. I felt disgusted when I read Free Radical Design's reply to your question in issue 72. I am not a dick, your readers generally aren't dicks either, and this isn't *PlayStation Power*, so why are they giving poorly thought-out excuses when they should be admitting to the fact that they have sold out? Come on, get real, people. Yes, the Dreamcast will churn out less polygons, but to call it an out-of-date PC and not apply the same statement to the PlayStation 2, when Voodoo 3 is out now and its performance is very close – if not equal – to the PlayStation 2, while the Matrox G400 and the Riva TNT2 both outstrip the Voodoo 3. To know about the PC market and selectively compare it to a console's position is weak and insulting to readers who expect better information to come out of an interview that's printed in **Edge**.

Devon McFarlane,
via email

Many startup developers jump onto the Sony wagon simply because they perceive it to be the safest bet – they are naturally drawn to where the fewest risks lie. And, going on on its track record in recent years, that is not Sega territory.

I've worked as a game designer now for about six years. From small startup companies, to the larger development studios of Ocean and Psygnosis. You will have played my games – liked some, hated others. Hell, I don't mind either way, really. Whatever happens I get paid very well, thank you – and this thankfully continues (I'm not allowed to say with whom I work for now).

'Everyone's got a great game idea – I'm so **bored of people using that** to open a conversation – so fucking what! We've all got great game ideas, but **could you make it into a great game?** That's the hard part'

My reason for writing is simple. I wanted to commend the editorial staff at **Edge** for its continued encouragement to young people starting out, desperate to get into the games industry. Of course, I'm talking about your supplement with **E**73. Some stuff you wrote was right on the nail, while other stuff I felt was a little off the mark. But close enough all round to give aspiring creators an idea of where to start.

On that note I'd like to add a little encouragement of my own to those people who are thinking about trying to get in. Mainly, never give up. It's like the film industry, in the same way people say, 'Once you've got your foot in the door, you're in'. That's true. It's the hardest part to get to happen, but once you're in, you're in. As most people I come across want to be designers, it's the hardest of the lot to get into. Everyone's got a great game idea – I'm so bored of people using that to open a conversation – so fucking what! We've all got great game ideas, but could you make it into a great game? That's the hard part.

So to those budding game designers, from one experienced game designer: get in at the bottom and work your way up. No one, and I mean no one, is going to hire a freshman into the industry as a designer and let him or her go off with £2m of theirs to screw up on an 'idea'. It just doesn't happen.

Start as a tester, then lead tester, then junior designer and so forth. But be prepared for this to take years of hard work and ass kissing. I was lucky. I started out as a designer – even though I'd never done anything like it before – just before the big console boom. Thank God I had a talent for it, and it paid off. But it's a lot harder now, and my heart goes out to you guys and gals. But it's the ones who never give up that get in.

scuffpuppy,
via email



Last issue's supplement spurred 'scuffpuppy' on to urge aspiring designers to never give up

It had the audacity to take on Nintendo – and win.

It was Edge's publisher of the year in 1998.

It remains refreshingly independent.

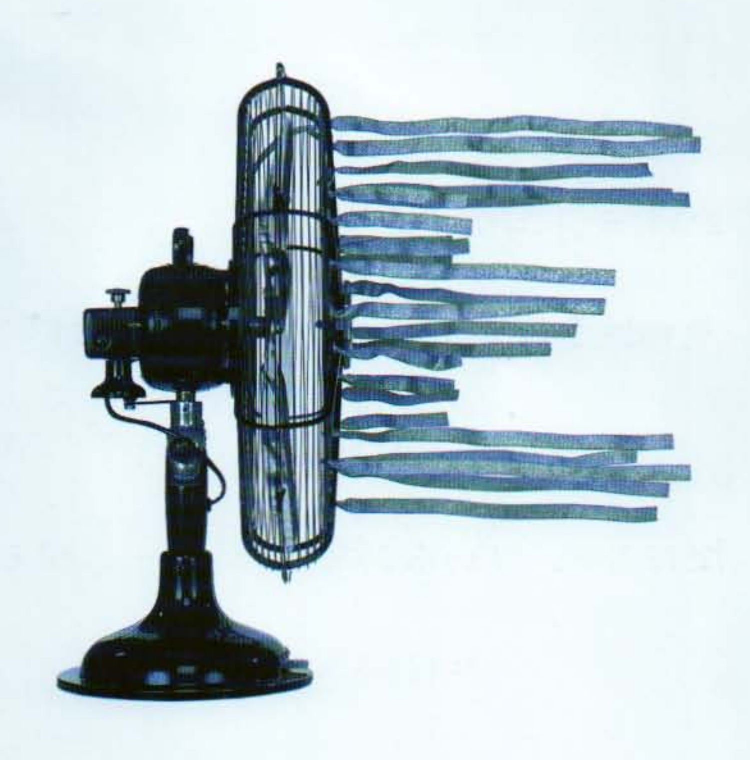
Where now for one of the UK's greatest exports?

Find out next month.



ISSUE SEVENTY-FIVE

ON SALE AUGUST 9




future
Your Guarantee Of Value


AUGUST 1999
£3.50
08
9 771350 159014